H. O. No. 188

NAVAL AIR PILOT

ALASKA PENINSULA
SOUTHERN AND SOUTHEASTERN
ALASKA

CORRECTED TO JUNE 1, 1934
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NOTICE

ADDITIONS AND CHANGES

This publication is corrected from information received in the Hydrographic Office up to the date noted on the title page.

Additions and changes will be published in the Notice to Aviators issued semimonthly.

PREFACE

Hydrographic Office Publication No. 188.—Naval Air Pilot of the Alaska Peninsula, Southern and Southeastern Alaska—is designed to furnish information of assistance in the navigation of aircraft in the aforementioned areas. The publication is divided into three parts and contains information on aircraft facilities and such other specific data as are considered of value.

Part I contains general information concerning topographic features, operating facilities, meteorological conditions, air routes, and distances.

Part II contains detailed information and sketches of seaplane anchorages, and landing fields.

Part III contains photographs of seaplane anchorages, landing fields, landmarks, and other aids to air navigation.

The principal sources of information examined in the preparation of this publication are:

Reports and publications from the various Government departments.

Report of Survey on Commercial Aviation Operations in Alaska, by Lt. James P. Farnham, U.S.N.R., of the American Airways, Inc., 1932.

The geographical positions (coordinates) which are given throughout the book are approximate.

Distances are expressed in nautical miles.

Every opportunity should be taken to check and add to the information contained in this publication; aviators and others are requested to notify the Hydrographic Office, Navy Department, Washington, D.C., direct, of any errors they may discover, or any additional matter which they consider should be inserted.

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INDEX CHART
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PART I

GENERAL TOPOGRAPHIC FEATURES, OPERATING FACILITIES, METEOROLOGICAL CONDITIONS, AIR ROUTES, AND DISTANCES

CHAPTER I

GENERAL TOPOGRAPHIC FEATURES

The territory included in this publication comprises all the Alaska Peninsula, southern and southeastern Alaska.

Mountainous in the extreme, the land areas are cut by innumerable tidewater bays, sounds, inlets, and fiords, some of which are flanked by huge glaciers descending the mountain passes. Peaks 3,000 feet in height are commonplace, while scores have elevations above 5,000 and a number rise to 10,000 feet or more, and some of the peaks of the Fairweather group (58°55′ N., 137°30′ W.), to 15,000 feet.

From Kodiak Island eastward, the precipitous slopes of the mountains are for the most part covered to heights of from 1,000 to 3,000 feet with forests of spruce, hemlock, and some cedar. To the southwestward of Kodiak Island, the Alaska Peninsula and the contiguous islands are entirely devoid of forests, or, in fact, of any form of tree growth.

A most distinctive feature of southern and southeastern Alaska is its glaciers, of which there are many. Some of them, notably Taku (58°28′ N., 134°06′ W.), actually reach tidewater and desposit in Taku Inlet huge masses of ice.

The western portion of southern Alaska embraces the Prince William Sound region, Kenai Peninsula, Kodiak Island, and the Pacific Slope of the Alaska Range (named Aleutian Range), to the extremity of the Alaska Peninsula. Conspicuous in this range are a number of high volcanic peaks, the northernmost of which, Mount Redoubt (60°29′ N., 152°45′ W.), rises to a height of 10,200 feet.

Southeastern Alaska, except for the narrow strip of mountainous mainland, consists of a vast chain of islands known as the Alexander Archipelago. Among the larger islands are Chichagof, Baranof, Admiralty, Revillagigedo, and Prince of Wales, the latter having a length of 140 miles and a width of 40 miles. Most of the islands are mountainous, rough, and broken and, excepting the higher summits, are covered with a dense growth of timber. The mountains on the mainland are higher, less wooded, and usually snowcapped. The snow line in mid-summer reaches an altitude varying, according to local conditions, from 2,000 to 5,000 feet. On the islands, the mountains do not usually reach a sufficient altitude to retain snow throughout the year.

Southern Alaska is similar in its topography to that of southeastern Alaska.

Alaska Peninsula- here the mountains are high, irregular, and bold; many of the peaks reach heights of 2,000 to 9,000 feet. A number of lakes and sizable streams are found inland. Occasional settlements, canneries, and fishing stations are scattered along the coast and among the off-lying islands.

CHAPTER II

AIRCRAFT OPERATING FACILITIES

SEAPLANE OPERATING FACILITIES

Seaplane operations can usually be conducted with reasonable safety throughout the entire coastal area of Alaska during the summer, except on the Arctic coast,

Throughout a great part of the interior, seaplane operations can be conducted with reasonable safety as the principal rivers over the greater part of their lengths offer fair to good seaplane landing and beaching facilities. For approximate times during the year when operations are feasible see chapter IV, Air Routes. All of the principal valleys of the interior contain many lakes of varying sizes in which landings can be made.

South and southeastern Alaska.—From the point of view of physical conditions, flying operations in the entire south coastal area, including southeastern Alaska, are limited almost entirely to seaplane operations the year round.

While many protected inland waterways exist in southeastern Alaska, seaplane operations, except during the summer months, would be necessarily very limited because of the high percentage of rainy weather, low ceilings, icing conditions, occasional severe general storms, and violent local winds.

During the summer, operations can be conducted between all southeastern Alaska points in the interior by the use of seaplanes.

Along the barren coast line between Icy Straits and Prince William Sound in the central Alaska coast only seaplane operations are possible and then at considerable risk due to the exceptionally unfavorable weather conditions and the lack of suitable harbors.

While protected harbors and fair beaching facilities exist at Cordova, Valdez, and Seward, the generally unfavorable weather conditions similar to those of southeastern Alaska make the use of seaplanes in this area impractical except during the summer.

Interior.—All of the open valleys of the interior are dotted with many lakes, and this condition, together with the great river systems, makes the operation of seaplanes logical throughout the greater part of the interior in summer.

In a few instances, particularly in crossing the passes of the Alaska Range, a distance of from 30 to 40 miles without water landing facili-

ties must be traversed. Landings can be made as safely on pontoons as on wheels in these areas on account of the nature of surface above timberline and the soft, mossy surface and growth of trees below timberline.

In operating seaplanes in rivers, great care must be exercised to avoid shallow water and shifting bars. Occasional rapid rises and falls of river heights make the securing of seaplanes on river banks a rather hazardous undertaking.

LANDPLANE OPERATING FACILITIES

In general, there is no area in Alaska in which landplanes can be operated with a satisfactory degree of safety. In the larger rivers of the interior, during low-water stages, emergency landings can usually be made with reasonable safety on the numerous bars.

Southern Alaska.—In the coastal area of southern Alaska, several landing fields have been constructed. These fields are situated on small river deltas surrounded by high mountains. Operations from these fields to the interior are practical during the summer with landplanes, but only between these fields and the interior and not from these fields to another, as the territory traversed between fields is over the waters of Prince William Sound and the mountainous islands lying therein.

The rest of the southern area, including the lower portion of the Kenai Peninsula, which is rugged and heavily timbered, and the Alaska Peninsula together with the outlying islands offer no facilities for the operation of landplanes.

Southeastern Alaska.—Owing to the topography of the country in southeastern Alaska, only one small field has been developed, that being at Skagway, which prohibits the use of landplanes in this area except between this one field and the interior during the summer.

SKI OPERATIONS

During the winter, after the freeze-up and after reasonable snowfall, fields, lakes, and rivers can be used for ski landings. After a foot or more of snow has fallen, ski landings can be made on the open tundra of the Seward Peninsula, the Bering Sea coast, and in many places on the frozen snow-covered swamp lands of the interior valleys.

No facilities for ski operations exist in southeastern Alaska except on the large lake near Klukwan, northwest of Haines, and on rare occasions on the field at Skagway. No facilities for ski operations exist on the western portion of the Alaska Peninsula.

South and southeastern Alaska.—During the winter, ski operations at Skagway are impractical owing to the general lack of snow in that locality.

Prevailing climatic conditions at Klukwan, together with the presence of the large fresh-water lake adjacent to it and its connection by road to Haines, make possible year-around connections with the interior by seaplanes in the summer and skis in winter. The absence of any protected fresh-water lake of reasonable size or of slow-flowing rivers combined with relatively high temperatures prohibits ski operations on ice, except in the one locality mentioned.

Snow conditions at the Seward and Cordova landing fields are subject to rapid change, being immediately adjacent to the ocean, and permit but very irregular operations on skis. A large fresh-water lake exists adjacent to Cordova and intermittent operations may be conducted during the winter as ice conditions are generally favorable from December to March. Snow conditions at the Valdez field are generally favorable for ski operations during the winter. While some lakes exist in the Alaska Peninsula, ice and snow conditions are subject to rapid change even in midwinter, making operations hazardous.

Ski operations are conducted from the field at Anchorage as soon as snow is sufficiently deep and before the arrival of sufficient snow, from the ice on Lake Spenard. Generally, 5 inches of firm ice is sufficient to sustain the landings and take-offs of planes having a gross weight of less than 6,000 pounds.

Interior.—In the valleys of the interior, it is seldom that the snow reaches such a depth during the winter as to hinder ski operations to any extent. Comparatively heavy snowfalls on lakes and rivers, when occuring before the ice has frozen to a sufficient thickness to support the snow weight, the ice cracks and overflow of water above the ice and under the snow will cause a great deal of inconvenience in taking off, although it rarely seriously affects safe landings.

The freeze-up of the lakes and rivers in the interior occurs usually in the latter part of October, at which time operations must be transferred from pontoons to skis; immediately after the freezeup, great care must be taken to avoid thin ice. The break-up of the ice in lakes and rivers usually occurs early in May, after which operations must be transferred from skis to wheels or pontoons. Just before the break-up in the spring, great care must be exercised in landings because of weak ice.

CHAPTER III

METEOROLOGICAL CONDITIONS

WINDS, WEATHER, AND CLIMATE

SOUTHERN AND SOUTHEAST ALASKA

General.—Lying entirely within the North Temperate Zone, the section possesses a distinctly temperate climate, and nearly all of it is of the oceanic or insular type. The northern extension of the ocean, known as the Gulf of Alaska, and the Aleutian Islands region to the westward, are recognized as the main breeding place of cyclonic storms of the Northern Hemisphere during the fall and winter seasons, corresponding to the secondary breeding place over the North Atlantic in the region of Iceland.

As the greater portion of this section lies to the eastward or northeastward of this permanent winter "low", the resultant air circulation gives prevailing southerly and southeasterly winds as far west as Prince William Sound. Originating over the warm waters of the North Pacific, with its Kuroshiwo, or Japan current, these winds are comparatively warm and have an initially high vapor content. As they reach the higher and colder altitudes their vapor is condensed, and much cloudiness and precipitation are induced on the seaward slopes of the mountains. The precipitation is therefore greatest in the southeastern part of the section and in localities along the coast farther north, where vertical configuration is a factor in condensation.

Seasons vary greatly, but in general the summer season, from about May to October, is the drier season, and the rains, though frequent, are local; occasional gales from southeast to southwest occur, but they are usually less severe than in the fall and winter. From about November to April is the rainy season, and rains or snows are general and continue for extended periods with little interruption; gales increase in frequency and severity. The temperature on the outside coast is generally above 32°, but in the inlets reaching into the interior it is considerably lower.

Winds.—The prevailing winds in summer are from southwest and northwest, the former during the early months and the latter blowing freshly and with great regularity during June, July, and August. In September and the early part of October the winds are uncertain, and there is generally much calm and heavily overcast weather. The usual winter winds are southeast or southwest, more frequently the

former, accompanied by rains; they set in toward the end of October and continue until the middle of April. Southeast winds are invariably accompanied by mist or rain, and east and northeast winds usually bring snow. Southwest and northwest winds are clearing winds. A north or northeast wind frequently occurs at intervals during the months of December, January, and February; it is always accompanied by a high barometer, and at such times a continuance for several days together of clear, cold, frosty weather may be expected. The strength of the summer winds depends greatly upon local circumstances. They frequently blow freshly down the channels with high shores which lie in a northwest and southeast direction. The wind usually begins at sunrise, increases in strength until about 3 p.m., and then gradually moderates toward sunset. The nights, as a rule, are calm during the summer months; but if the wind prevail but slightly from the northwest during the night it will probably blow hard from that quarter on the following day.

Gales occur at all seasons, but increase in frequency, severity, and duration during the fall and winter months, and toward the north. The summer gales are of shorter duration than those of fall and winter, and seldom last more than 48 hours. In the fall of the year gales lasting for 8 days have been experienced. They usually begin in the southeast and terminate and clear from the southwest.

Southeast gales accompanied by thick, rainy weather occur at all seasons. They are generally preceded by a short interval of calm, cloudy weather and usually but not invariably by a falling barometer and rising temperature. They spring up gradually from east or east-southeast, hauling southward, accompanied by rain or thick weather, the barometer falling rapidly. When the barometer becomes stationary the wind shifts to the southwest and blows heavily with clearing weather, but with frequent squalls of rain. The barometer begins to rise when the wind hauls to southwest, from which quarter it generally blows from 12 to 20 hours.

When the southwest gale of winter is not preceded by one from southeast the barometer seldom falls, but either remains stationary, when the gale may be expected to continue longer, or rises slowly, when it will gradually subside and the fine weather follow. A low barometer in winter is not always accompanied by a gale or bad weather, but on such occasions there is often a heavy fall of snow on the hills and a sudden fall in the temperature.

Northerly gales are almost exclusively confined to the winter season—November to April. They are of rare occurrence in the vicinity of Juan de Fuca Strait, but increase in frequency toward the north. They generally begin from the northeast, accompanied by rain or snow, and back through north to northwest; from the last quarter the wind moderates and the weather clears. These winds

sometimes blow with great force, especially through the inlets lying in a north and south direction, and having high land on both sides.

Fog.—On the outside coast of British Columbia and southeastern Alaska, and in the inlets opening from the ocean, fog may occur at any time, but is most frequent in July, August, and September. During this season the fog usually comes after midnight, and holds until the following noon, or later, unless previously dispelled by clearing winds or the drying effect of the sun. During the fall and winter fogs are more infrequent, but when they occur are likely to be of longer duration than those of summer. Continuous fogs, of varying densities, lasting 2 to 10 days have been known. In the spring fogs are rare and of brief duration. Westerly winds are those which drive in sea fog; easterly and northerly winds are usual clearing winds. Southeast winds also clear away the fog, but are invariably accompanied by mist or rain. Patches of fog hanging about the summits of mountains, a moist atmosphere, and a fog bank seaward, together with a westerly wind, are certain indications of a coming fog.

The following table shows the average number of hours per month, from a record of about 15 years, that the fog signals were operated at the stated light stations of southeastern Alaska.

Hours of operation of fog signals

Light station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Tree Point	20	16	17	7	8	8	19	34	24	17	8	19	197
Mary Island	21	17	14	6	9	3	13	25	19	16	17	19	179
Guard Islands	26	23	22	18	6	2	19	8	9	12	12	20	177
Lincoln Rock	20	22	27	7	1	5	10	12	7	12	16	19	158
Five Finger	54	45	42	10	6	16	19	40	29	28	27	40	356
Sentinel Island	65	55	44	11	2	2	6	10	13	12	49	60	329
Eldred Rock	72	66	37	11	2	2	4	7	6	10	67	68	352
Point Retreat	1	7	20	10	23	33	34	44	39	6	0	1	218
Cape Spencer	104	107	101	10	62	65	52	64	64	18	15	45	707

NOTE.—These data are from a record of about 15 years, except for Point Retreat and Cape Spencer, where the record is of about 5 years.

In southern Alaska the average hours per year of fog duration at Cape Hinchinbrook and Scotch Cap, Unimak Island, was 783 and 1,421 hours, respectively.

Precipitation.—No part of continental United States receives as much precipitation as the southeastern portion of Alaska, as shown by the records of Ketchikan and Fortmann Hatchery (55°36′ N., 131°25′ W.), where the annual totals at elevations near sea level average 157 and 148 inches, respectively. The precipitation along the coast, except in a few localities, ranges above 100 inches a year as far westward as the southern portion of Prince William Sound, and probably the immediate southern coast of Kenai Peninsula. From this point southwestward the annual amount diminishes, the Pacific slope from Kodiak Island to the extremity of the Alaska Peninsula receiving from 50 to 60 inches.

Owing to the successive mountain barriers that intercept the prevailing moisture-laden southerly winds, the sea level precipitation in the southeastern district diminishes gradually, though irregularly, with recession from the open sea, until, in the northern portion, as shown by records at Skagway and Klukwan (59°24′ N., 135°54′ W.), it is only 20 to 25 inches. The influence of the mountains is felt, also, at the northern end of Prince William Sound, where at Valdez, the annual total averages only 52 inches as against 131 inches at Cordova, on the immediate Pacific coast 50 miles to the southward, and 147 inches on Latouche Island, in the southern end of Prince William Sound. To the northward and westward of the mountains of Kenai Peninsula the precipitation decreases rapidly, not only because of the influence of the mountains themselves, but because here the prevailing winds are no longer from the direction of the sea, but from the comparatively dry interior of the territory.

Unfortunately, the records of weather conditions in this section have nearly all been made near sea level. However, a 3-year record at Jumbo Mine (55°15′ N., 132°37′ W.), an elevated station on the western slope of Prince of Wales Island, conforms to the usual increase of precipitation with elevation on slopes subjected to moisture-laden winds. Here, at a height of 1,500 feet, the precipitation appears to average about 195 inches annually, included in which is the water equivalent of approximately 450 inches of snowfall. Perseverance Camp (58°18′ N., 134°20′ W.), 90 miles east and 150 miles north of the open ocean, with an elevation of 1,400 feet, receives approximately 150 inches of rain and melted snow, as against only 80 inches at Juneau, 4 miles distance and at sea level.

As in all mountain countries, the snowfall varies greatly. Owing to the comparatively mild winter temperatures, the southern end of southeastern Alaska normally has the least sea-level snowfall, as shown by the records of 40 inches and 53 inches, respectively, at Ketchikan and Sitka. But the sea winds in these same regions, by reason of their greater vapor content incident to the mild temperatures, produce the heaviest snowfall at the higher elevations, as indicated by the Jumbo Mine record.

To the westward of the 141st meridian, the heaviest snowfall in the region covered by observations seems to be the upper end of Prince William Sound where, at Fort Liscum, a 16 year record shows an average of 369 inches a year. That the snow precipitation over the great Malaspina Glacier and in parts of the lower Copper River Valley is in excess of this is quite probable, however. Along the immediate Pacific coast the snowfall ranges from 150 inches at Cordova to about 50 inches on the eastern side of Kodiak Island.

The seasonal variation in the amount of snow is great, the total for seasons at practically all stations being more than double that

of other seasons. While the first appreciable snowfall at sea level occurs generally in October and the last in the latter part of April and occasionally in the fore part of May, the mountain slopes above the tree line may receive several inches of snow as early as the last of August or the fore part of September. There have been seasons when the southern part of the section received no appreciable snowfall at sea level until the fore part of December, and none after February.

The accumulated snowfall of the winter disappears at sea level between the end of February and the middle of May, depending on the distance from the open ocean, latitude, the amount of snow that fell during the season, temperature of the early spring months, etc. The date becomes later, of course, with increase of elevation and in the timber, while the numerous glaciers show that perennial snow deposits may exist in spots at various levels, even down to the sea in a few cases.

The wettest months are September, October, and November, and the dry season is that of the spring and early summer. The desparity between the wet and the dry seasons is greatest in the region of greatest annual precipitation and least from Kodiak Island southwestward along the Alaska Peninsula.

The number of days on which a measurable amount of precipitation occurs ranges from 242 in the southern end of southeast Alaska to 114 days in the northern end at Skagway and 119 days at Anchorage.

Despite the fact that the normal annual precipitation of a goodly portion of the section is in excess of 100 inches, there are no records of extraordinarily heavy amounts within short periods of time. The heaviest two 24-hour totals recorded are 9.40 inches at Cordova and 8.07 inches at Ketchikan. Rains in part of the territory occur at remarkably uniform rates per hour, and that there are no sudden or extremely heavy downpours of short duration, such as occur in thunder storms in the Central and Southern States.

Thunder storms, while by no means unknown, are infrequent and usually mild in character. They apparently may occur in any month of the year and have been known to attend heavy snowfall.

Temperatures.—The modifying influence of the North Pacific Ocean is shown in the comparatively mild temperatures that prevail throughout this part of the territory. Warm winters and cool summers are the rule, and the annual range in temperature is therefore small. Along the immediate Pacific coast the mean annual temperatures range from 44° in the extreme southeast to 40° in the vicinity of Cross Sound. From this point northwestward and thence southwestward to the end of the Alaska Peninsula the annual mean of the immediate ocean coast line does not vary more than 1°. As distance from the open ocean increases, the mean temperature of

the year decreases to 36.6° at Klukwan and 32.5° at Anchorage. This decrease is in spite of higher summer temperature in the interior than prevails on the coast and is due entirely to much colder weather in winter.

The frequency of freezing temperatures is dependent more upon remoteness from the sea and altitude than upon latitude. Freezing temperatures are practically unknown during June, July, and August, except in elevated regions and in the northern portions of the section, and when they do occur it is near the beginning or end of this 92-day period. The one exception to this statement is found in the record of Kenai, in the western portion of Kenai Peninsula, where 9 years of observation show an average of 3 days with temperatures of 32° in June, 1 day in July, and 2 days in August.

Excepting the vicinity of Kenai, the average date of last freezing temperature in spring occurs in the month of May in this section. In some localities in the southeast it is in the fore part of the month, while on the western and northern sides of Kenai Peninsula it occurs during the last 2 days of the month. In autumn the average date of first freezing temperature falls during the first 10 days of September near the northern border of the section, but not until the first half of October on the immediate Pacific coast and in the extreme southeast.

While zero temperatures apparently may occur throughout the section, they are remarkably infrequent, considering the latitude, in the southern portions and along the immediate Pacific coast. At Sitka and Kodiak the average number of zero days per year is only 1, but this increases to 40 at Klukwan, near the northern end of the section, and to 59 at Anchorage, the most northern station in the section. Except in the vicinity of Klukwan, where a reading of 99° has been recorded, the temperature does not rise to high levels during the summer. At Cordova the mercury reaches 70° an average of only once a year, and at Kodiak only twice a year, but the number of such days increases with distance from the coast to 36 at Klukwan and Fortmann Hatchery.

ALASKA PENINSULA

General.—The weather along the Alaska Peninsula is moist and cool throughout the year. Rain and snow falls are excessive and there are long periods of rainy, moist, and cloudy weather. Snow may fall at the water level until June and on the peaks until late in the summer. It extends far down the slopes at the close of September and may be expected at the water level early in October. Fog and mist may be expected at any time from spring until fall and often last several days.

Fog.—Fog may be encountered at any time during the summer months, but it is more prevalent during the months of June, July,

and August. There is much less fog on the north side of the Alaska Peninsula east of Unimak Pass. The southeast winds bring in the fog from the great fog banks that lie in the North Pacific.

Fog often hangs about the headlands and entrances to bays when the upper parts of the bays are clear. During the summer of 1929, the vicinity of Shelikof Strait was almost free from fog. Fog is much more prevalent on the southeast side of Kodiak Island than in Shelikof Strait.

Winds.—During the winter and early spring, the strong northwest winds predominate. During the summer months the winds are variable but are mostly southeast to southwest. With September the northwest winds again become prevalent. The strong northwest winds are usually accompanied with clear weather.

The southeast and southwest gales of summer are usually accompanied with rain and thick weather.

Strong winds draw in and out of the various bays and inlets and a variety of weather will often be experienced in a short distance.

With the exception of an occasional fine summer, the weather of the Alaska Peninsula can be classified as bad, and the difficulties of navigation are many.

COOK INLET

Winds.—The prevailing winds during the summer are easterly with rain, the gales during that time being from the same direction. In the late summer and early fall, fresh southwesterly winds with hazy weather but without rain are of frequent occurrence in the lower inlet, but they seldom blow with much force above the forelands. Fresh northwesterly winds may occur during the early summer; they are generally accompanied by rain and last from 1 to 2 days. At such times navigation in the inlet, except southward with an ebb tide, is uncomfortable and even dangerous for small vessels.

Easterly gales become more frequent in the fall, and southeast gales may also be expected in and following September. Snowstorms may be expected from the first of October to the last of April. Cloud caps forming about the high peaks are generally followed by easterly weather and rain.

Fog may be expected occasionally during the summer. Its duration without partially clearing is generally short, although spells of generally foggy weather may last several days.

BERING SEA

The most striking feature about the weather in Bering Sea is its great uncertainty throughout the year. Good weather is rare and not lasting, and the wind cannot be depended upon to remain long in one quarter. The late spring and summer are mild and very foggy, with frequent periods of light weather, comparatively few

strong winds, and considerable rain. After September 1 gales become frequent and heavy, fogs gradually lessen, and toward the latter part of the month snow often accompanies the storms. During all the fall, gales are frequent, violent, and from almost any quarter.

During the fall and winter there are often periods of very low barometer (readings below 29.00″ being common) accompanied by moderate to strong gales, with rain or snow. These gales, though sometimes very severe, are usually not so strong as would be expected by the fall of the barometer. After December and continuing into the spring there are often periods of moderate weather, and while severe gales occur, they are less frequent than in the fall. Strong winds or gales from any quarter always bring thick weather, rain, or snow. With easterly or southerly winds the rain is continuous, while with westerly or northerly winds the rain or snow occurs at intervals in squalls, and when the wind subsides the weather is likely to be clear.

Southeast gales, with falling barometer and rising temperature, are almost invariably preceded by an almost unusual clearness of the air; cirrus clouds are seen southwestward, which gradually thicken and overspread the sky. The wind usually shifts to southwestward when the barometer ceases to fall, but it sometimes backs from southeast to northeast, and generally goes to northwest before subsiding. Upon abating, the gale is followed by light westerly winds and comparatively clear weather.

METEOROLOGICAL SUMMARY OF THE NORTH PACIFIC OCEAN

The following chartlets show the average conditions of wind and water over the North Pacific Ocean for each month during the year.

JANUARY



American coast winds.—In the most northern part of the Gulf of Alaska the prevailing winds are north and northeasterly; in the neighborhood of Sitka, easterly; from the 55th to the 40th parallel, westerly and southerly; 40th to 20th parallel, northwesterly; 20th to 10th parallel, northerly to northeasterly; 10th to 5th parallel, northwesterly, and thence to the Equator, southerly.

Winds of high latitudes.—In Bering Sea south of Alaska the winds are northerly and in the 5° square immediately west of the Pribilof Islands; in the adjacent square to the north the winds are northeasterly.

Westerly winds.—The prevailing winds are westerly over the western part of the ocean north of the 25th parallel, except in Asiatic coast waters, due to the cyclonic circulation accompanying the Aleutian Low, and the anticyclonic circulation accompanying the North Pacific and the Asiatic Highs.

Gales.—The percentage of gales is high over most of the ocean between the 35th and 45th parallels and longitudes 145° E. and 140° W. Over most of the region of the prevailing westerlies the wind system is frequently interrupted by cyclonic storms accompanied by southeast changing to northwest gales. These gales often sweep the coast from San Francisco northward.

Fog.—The percentage of days with fog has decreased to 11 along the American coast from Vancouver to Cape San Lucas. Over most of the fog area to the westward as far as longitude 160° W. and in the Gulf of Alaska the percentage is 15 to 20.



American coast winds.—The winds are northerly west of the Alaska Peninsula; in the neighborhood of Sitka and to the 45th parallel, southeasterly; 45th to 40th parallel, northerly and southerly; 40th to 15th parallel, northwesterly; 15th parallel to Panama, northeasterly; Panama to 5th parallel, northerly; and thence to the Equator, variable with weak southeast trades.

Westerly winds.—The prevailing winds are northwesterly over the western half of the ocean north of the 25th parallel, except east of Kamchatka, where they are northeasterly. Over the eastern half of the ocean north of the 35th parallel they are westerly, but more variable than over the western half, and frequently are reversed to an easterly direction during the passage of barometric highs and lows.

Gales.—The percentage of gales is high over an irregular area occupying the western part of the ocean south and southwest of the Aleutian Low, between the 50th and 30th parallels and longitudes 145° E. and 165° W.

Fog.—The percentage of days with fog averages 20 to 25 along the American coast from the Alaska Peninsula to Cape San Lucas. It decreases toward the west.



American coast winds.—Northerly winds prevail north of the 55th parallel from the Alaska Peninsula to longitude 145° W.; thence to 140° W. the winds are northerly and southerly; east of 140° W., easterly. Northwesterly winds sweep the coast from the 55th to the 15th parallel, but are least frequent between the 40th and 50th parallels. From the 15th to the 10th parallel the winds are light north and northeast; 10th to 5th, light northwesterly, and thence to the Equator light southwesterly.

Westerly winds.—The prevailing winds are westerly over a considerable portion of the ocean between parallels 55 and 30. Over the western half of the ocean, between parallels 50 and 30, northwest winds are most frequent; over the eastern half, between parallels 55 and 35, westerly and southwesterly winds prevail.

Gales.—The percentage of gales is highest, 11 to 17, in an area between longitudes 145° and 170° E., and latitudes 35° and 40° N., and nearly as high in an area extending thence northeastward to the Aleutian Islands.

Fog.—The percentage of days with fog is highest, 15 to 20, along the American coast from latitude 55° N. to Cape San Lucas and westward, between the parallels 40 and 55, to longitude 160° W.



American coast winds.—The winds are variable over the northwestern part of the Gulf of Alaska and mostly easterly and southeasterly over the northeastern part; thence southward along the coast to the 45th parallel they are southerly; 45th to the 15th parallel, generally northwesterly; and south of the 15th parallel, light and variable, except southeasterly in the vicinity of Corinto, northwesterly off the Isthmus, and southwesterly near the Equator.

Westerly winds.—The prevailing winds are westerly over most of the area between the 40th and 55th parallels; they tend to become northwesterly west of longitude 150° W., and to become southwesterly east of this longitude to within about 5° of the coast.

Winds of Bering Sea.—The prevailing winds are northeasterly in Bering Sea north of the 55th parallel except east of the Pribilofs, where they are westerly. They are westerly south of the 55th parallel.

Gales.—The percentage of gales is generally high over most of the region of the westerlies, being 11 to 13 between parallels 50 and 55 and longitudes 140° to 160° W., and 10 to 12 in a small area east of the Kuril Islands.

Fog.—The percentage of days with fog is 15 to 20 in midocean between latitudes 30° and 50° N., in an area with a northeast-southwest trend, and along the American coast from San Francisco to Cape San Lucas.



Winds north of latitude 55° N.—Northerly winds prevail over most of Bering Sea. In the Gulf of Alaska the winds are easterly, except in the neighborhood of Kodiak and the Peninsula of Alaska, where they are variable. Calms occur 20 percent of the time in the Gulf of Alaska and 8 to 20 percent in the Bering Sea.

American coast winds.—South of the 55th parallel westerly winds occur along the coast to Vancouver Island; thence to the 15th parallel the prevailing winds are northwesterly; 15th to 5th parallel light, variable winds occur, broken by frequent calms. Light southwesterly winds occur near the Equator.

Westerly winds.—The prevailing winds are westerly, force 4 to 5, between the 40th and 55th parallels, except northeasterly immediately east of Kamchatka.

Gales.—As the spring season advances, the percentage of gales decreases in the region of the westerly winds, the average in May being 6 to 7 percent over the entire area. The highest percentage, 12, occurs in the 5° square north of the 40th parallel and west of the 180th meridian, also in the square north of the 45th parallel and west of longitude 150° W.

Fog.—The area of highest percentage of days with fog, 20 to 25, as far as shown by the chart, extends northeastward from northern Japan to the Aleutian Islands. The percentage is between 15 and 20 over the greater portion of the remainder of the area indicated by dotted lines.



Winds north of latitude 55° N.—The winds are generally light and variable north of the 55th parallel, and calms occur 20 percent or more of the time, except in Bering Sea south of the 60th parallel, between longitudes 170° E. and 170° W.

American coast winds.—South of the 55th to the 15th parallel the prevailing winds are northwesterly; thence to the 5th parallel variable; thence to the Equator southwesterly.

Westerly winds.—The prevailing winds are westerly, force 4, over most of the region between the 40th and 55th parallels, but there is also a high percentage of variable winds over the greater portion of this area. The westerlies are less pronounced in June than during the colder months, owing to decreased barometric gradients and to more settled conditions.

Gales.—The percentage of gales in June is low over the entire ocean. The highest percentage, 3 to 5, is between the 40th and 50th parallels and longitudes 155° E. and 180°.

Fog.—The area of highest percentage of days with fog, 40 to 50, lies between the western Aleutian Islands, and southeastern Kamchatka. Over most of the remainder of the ocean north of the 30th parallel the percentage varies from 10 to 40. Along the American coast the percentage is 30 from Cape San Lucas to San Francisco and 20 to 30 from San Francisco to the 55th parallel.



Winds north of latitude 55°.—The winds are generally light and variable north of the 55th parallel. Calms occur in this region about 19 percent of the time in the Gulf of Alaska and 23 percent of the time in Bering Sea.

American coast winds—The southwest monsoon.—South of the 55th parallel to Cape San Lucas the prevailing winds are northwesterly. Thence to the Equator they are variable with frequent calms. The winds of a light and imperfectly developed monsoon blow over a narrow area that extends from Colombia to longitude 120° W. between the zone of calms and the southeast trades.

Westerly winds.—Owing to the slight barometric gradient over the northern part of the ocean, resulting from the disappearance of the Aleutian Low, the prevailing westerly winds occupy a smaller area and are less pronounced than during June.

Gales.—The percentage of gales is light over the entire ocean; it is greatest, 4 to 5, between Taiwan (Formosa) and longitude 135° E.; it is 2 to 4 in the area between longitudes 160° E. and 180° and latitudes 40° and 45° N.

Fog.—An area of 55 to 60 percent of days with fog covers the ocean between the Kuril and the Aleutian Islands; thence there is a decrease in percentage in all directions, except close off the coast of North America, where there is a local increase to between 30 and 35 percent from Vancouver Island to the extremity of the California Peninsula.

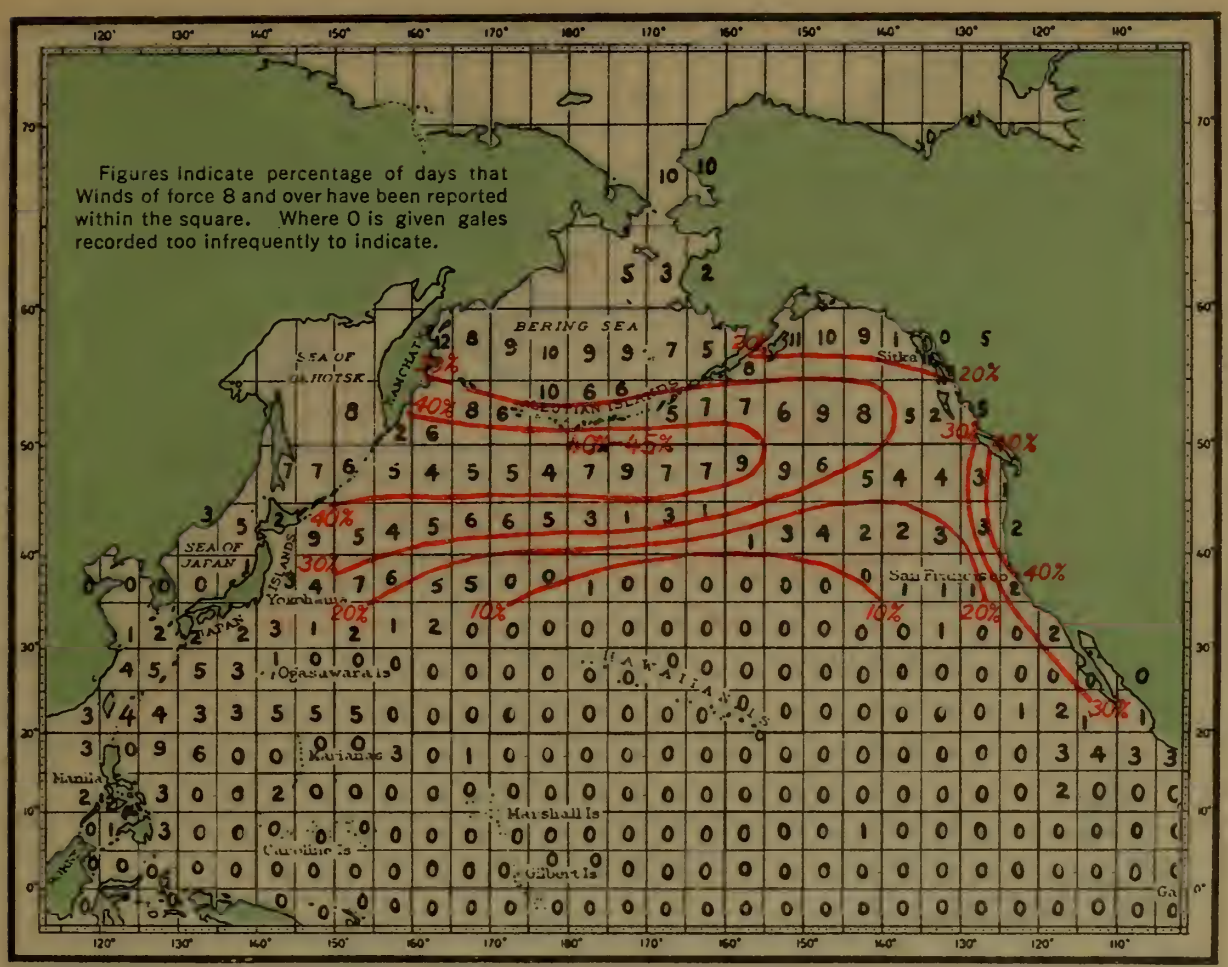


Westerly winds.—North of latitude 45° the prevailing winds are not so steady from the west as during the colder months, and they frequently blow from more northerly and southerly directions.

American coast winds.—Northwesterly winds prevail along the American coast from latitude 55° to Cape San Lucas; thence to latitude 10° N. calms, light variable and northeasterly winds prevail; thence to the Equator southwest monsoon winds blow over a narrow area that extends between the zone of calms and the southeast trades from Colombia to longitude 130° W.

Gales.—The highest percentage of gales, 5 to 7, occurs over an area that extends from Luzon and Taiwan (Formosa) eastward to 140° E. The percentage of gales is 4 to 6 in an area lying between latitudes 40° and 45° N. and longitudes 165° E. and 180°.

Fog.—An area of 40 to 45 percent of days with fog lies south of the Aleutian Islands. The percentage is 20 to 30 in Bering Sea. Along the American coast from Vancouver to San Francisco it is 30 to 49, and 30 to 33 thence to Cape San Lucas.



Winds of high latitudes.—Northeasterly and southerly winds prevail in Bering Sea west of the southern half of the Aleutian Low; the winds are variable in the western part of the sea and westerly and southerly in the vicinity of the Aleutian Islands. In the Gulf of Alaska, except the extreme northern portion, and over most of the area between the 55th and 45th parallels the winds are mostly westerly and southerly, resulting from the combined influences of the Aleutian Low and the North Pacific High.

American coast winds.—South of Alaska the winds, as a rule, are southwesterly. Northwesterly winds prevail along the immediate coast from latitude 55° to Cape San Lucas; south of the point to Colombia the winds are variable, with frequent calms. Southwesterly winds occur on the South American coast from the 5th parallel to the Equator.

Gales.—The percentage of gales is generally high between the 45th and 60th parallels west of longitude 140° W. It is notably high, 11, near Kodiak Island, and highest, 12, immediately east of Kamchatka.

Fog.—The percentage of days with fog is 40 to 49 over a narrow belt extending along the American coast from Vancouver to San Francisco and 40 to 30 from San Francisco to Cape San Lucas. It is 40 to 45 in an area that extends from the Kuril Islands eastward between the 45th and 51st parallels to longitude 155° W. South of this area the percentages of fog diminish more rapidly than in any other direction.



American coast winds.—Over the western part of the Gulf of Alaska the winds are variable; over the eastern portion and southward along the coast to latitude 50° southerly and easterly winds prevail; from latitude 50° to latitude 40° they are mostly variable and calms are frequent; south of the 40th to near the 15th parallel they are northwesterly; thence to the 10th parallel they are light northeasterly; and from the 10th parallel to the Equator, westerly and southwesterly. Calms are frequent between the 25th and 5th parallels.

Winds of high latitudes.—Northerly winds, force 4 to 5, predominate in the eastern part of Bering Sea.

Westerly winds.—Westerly winds, force 4 to 5, prevail over most of the ocean between parallels 55° and 40°.

Gales.—The percentage of gales is moderately high north of the 35th parallel. South of this region gales are comparatively few, except in the square bounded by latitudes 30° and 35° N., and longitudes 150° and 155° E., and east of Taiwan (Formosa).

Fog.—The percentage of days with fog is much less in October than in September, but it continues comparatively high off the American coast, being 30 from Vancouver to San Francisco and 30 to 20 thence southward to Cape San Lucas. Fog diminishes rapidly in other directions, except over an area between latitudes 40° and 51° N. and longitudes 148° E. and 180°.



American coast winds.—Easterly winds prevail along the American coast in the eastern portion of the Gulf of Alaska; thence to the 40th parallel they are mostly from southerly quadrants; between the 40th and 15th parallels northwesterly winds prevail; and between the 15th and 10th parallels they are northerly and northeasterly.

Westerly winds.—The prevailing winds are westerly over the greater part of the ocean between the 35th and 55th parallels, owing to the cyclonic circulation accompanying the Aleutian Low and the anticyclonic circulation accompanying the high-pressure belt of the middle latitudes.

Gales.—Southeast to northwest gales occur frequently north of the 35th parallel, but their number decreases along the coast. The prevailing direction is northwesterly west of longitude 165° W. between the 35th and 50th parallels.

Fog.—The percentage of days with fog is generally less than in October. The area of maximum percentage, 20, is along the American coast from Vancouver to Cape San Lucas.



American coast winds.—The winds are easterly in the Gulf of Alaska in the neighborhood of Sitka, and southerly and westerly north of Vancouver Island. They are southeasterly between the Strait of Juan de Fuca and San Francisco, thence to the 20th parallel northwesterly; from the 20th to the 10th north to northeast; from the 10th to the 5th north to northwest; and from the 5th to the Equator southwesterly.

Winds of high latitudes.—In Bering Sea the winds are easterly and northeasterly in the eastern portion north of the 60th parallel, and northerly and northwesterly between the 60th and 55th parallels. Between the 55th and 50th parallels they are from westerly quadrants east of longitude 175° E., and immediately west of this meridian they are mostly southerly.

Gales.—The percentage of gales is high over most of the ocean between the 35th and 55th parallels, except in the vicinity of San Francisco and the Farallon Islands.

Fog.—The percentage of days with fog, 15, in the area of maximum percentage off the American coast between Vancouver and Cape San Lucas is less than in November. It continues low across the ocean and increases slightly in Asiatic waters.

METEOROLOGICAL TABLES

ANCHORAGE, COOK INLET (Lat. 61°14′ N., Long. 149°54′ W.)

[Elevation, 40 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	6.8	16.0	−2.4	47	−33	1.18	11	19.2							N.		
February	16.9	27.8	6.0	55	−31	.91	8	12.0							N.		
March	20.3	31.6	8.8	45	−19	.34	5	5.8							N.		
April	32.8	42.7	22.8	58	−15	.32	5	3.1							N.		
May	43.0	52.7	33.2	71	20	.59	7	.9							SW.		
June	52.2	61.5	42.9	79	29	.58	8	0							W.		
July	56.0	64.5	47.4	79	36	1.93	12	0							W.		
August	54.4	63.1	45.7	80	31	3.06	18	0							W.		
September	47.4	56.1	38.6	73	21	2.28	16	T.							N.		
October	34.6	42.6	26.6	62	−5	2.44	13	6.1							N.		
November	17.4	25.6	9.1	62	−18	.85	8	14.4							N.		
December	7.8	16.4	−0.5	47	−36	1.20	8	15.9							NE.		
For year	32.5	41.7	23.2	80	−36	15.68	119	77.4							N.		

Fog: About 30 days per year.

CORDOVA, PRINCE WILLIAM SOUND (Lat. 60°32′ N., Long. 145°43′ W.)

[Elevation, 25 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	26.2	28.1	17.2	52	−7	7.15	15	30.1	------	------	------	------	------	------	NE.	------	------
February	30.9	34.3	23.2	58	1	10.59	18	25.6	------	------	------	------	------	------	SE.	------	------
March	32.4	37.2	22.2	62	1	8.02	16	23.4	------	------	------	------	------	------	NE.	------	------
April	37.0	43.4	29.2	71	7	7.40	14	15.4	------	------	------	------	------	------	SW.	------	------
May	44.5	51.5	36.5	70	27	7.04	15	0.2	------	------	------	------	------	------	SE.	------	------
June	50.7	57.4	44.3	76	34	6.27	14	0	------	------	------	------	------	------	SW.	------	------
July	54.4	59.4	48.4	87	40	7.02	17	0	------	------	------	------	------	------	SW.	------	------
August	53.7	56.9	48.1	75	39	13.61	18	0	------	------	------	------	------	------	SE.	------	------
September	49.0	54.1	42.5	78	30	22.46	19	T.	------	------	------	------	------	------	SE.	------	------
October	40.9	44.5	35.2	72	19	16.60	20	2.4	------	------	------	------	------	------	SE.	------	------
November	32.5	35.7	27.0	60	5	10.52	16	18.1	------	------	------	------	------	------	SE.	------	------
December	28.6	30.0	20.6	49	−6	14.87	20	35.0	------	------	------	------	------	------	SE.	------	------
For year	40.1	44.3	32.9	87	−7	131.55	202	150.2	------	------	------	------	------	------	SE.	------	------

Fog: Rare.

DUTCH HARBOR, UNALASKA ISLAND (Lat. 53°54′ N., Long. 166°32′ W.)

[Elevation, 12 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity [1]	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	31.6	33.8	25.2	52	5	5.51	15	------	------	------	------	7	------	2	NW.	3.4	------
February	31.9	35.1	26.7	51	6	7.09	17	------	------	------	------	7	------	4	SE.	3.4	------
March	33.6	39.1	29.1	57	5	5.06	14	------	------	------	------	8	------	1	SW.	3.4	------
April	35.1	38.3	29.1	59	15	3.38	12	------	------	------	------	8	------	2	N.	3.4	------
May	40.8	45.8	35.5	62	22	5.10	14	------	------	------	------	8	------	7	SE.	3.2	------
June	46.0	50.9	40.6	73	30	2.84	9	------	------	------	------	8	------	11	NE.	2.8	------
July	51.3	56.9	45.0	80	36	2.39	9	------	------	------	------	8	------	11	SE.	2.9	------
August	51.4	56.5	45.2	78	28	3.30	13	------	------	------	------	8	------	9	SW.	3.0	------
September	47.2	52.5	42.2	78	28	5.95	18	------	------	------	------	8	------	5	SW.	3.5	------
October	41.4	46.3	36.6	65	24	9.05	20	------	------	------	------	8	------	2	SW.	3.6	------
November	35.4	39.3	30.4	58	14	6.95	18	------	------	------	------	8	------	1	SW.	3.5	------
December	32.0	36.2	27.3	53	12	7.07	19	------	------	------	------	8	------	1	SW.	3.7	------
For year	39.8	44.2	34.4	80	5	63.69	178	------	------	------	------	8	------	56	SW.	3.3	------

[1] Beaufort Scale.

JUNEAU, SOUTHEAST ALASKA (Lat. 58°18′ N., Long. 134°25′ W.)

[Elevation 80 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	27.5	30.8	23.6	50	−15	7.16	16	32.8	------	------	------	------	25	------	NE.	------	27
February	30.3	34.8	25.2	51	−15	5.33	13	23.2	------	------	------	------	38	------	SE.	------	28
March	33.8	39.0	28.7	61	−5	5.52	16	13.1	------	------	------	------	43	------	NE.	------	36
April	40.4	47.3	34.3	69	13	5.36	18	5.6	------	------	------	------	37	------	SE.	------	22
May	47.8	56.1	40.0	80	24	5.20	15	.1	------	------	------	------	46	------	SE.	------	22
June	54.4	62.9	45.8	87	31	3.54	14	0	------	------	------	------	37	------	S.	------	20
July	57.2	64.8	50.0	89	38	5.10	15	0	------	------	------	------	34	------	S.	------	19
August	55.3	61.4	49.2	87	36	7.14	18	0	------	------	------	------	26	------	SE.–S.	------	19
September	50.2	56.1	44.0	77	29	10.44	20	0	------	------	------	------	33	------	SE.	------	26
October	43.3	47.9	38.2	66	20	10.78	22	1.5	------	------	------	------	12	------	SE.	------	31
November	35.4	39.5	30.2	64	−1	8.43	19	7.2	------	------	------	------	29	------	SE.	------	32
December	31.0	34.8	26.8	60	−2	7.56	20	30.9	------	------	------	------	21	------	SE.	------	30
For Year	42.2	48.0	36.3	89	−15	81.56	206	114.4	------	------	------	------	32	------	SE.	------	36

Heaviest gales: Southeast gales may occur in this vicinity at any season, but are much more frequent in winter than in summer. They are usually accompanied by rain, but not always by mountain squalls. The strongest winds are in winter and are locally called "Taku Winds". They draw down the mountain passes from northward, in gusts, with terrific force.

KENAI, KENAI PENINSULA (Lat. 60°33′ N., Long. 151°15′. W.)

[Elevation, 80 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	10.3	------	------	49	−42	0.65	------	7.3	------	------	------	------	------	------	------	------	------
February	18.3	------	------	48	−46	.70	------	10.0	------	------	------	------	------	------	------	------	------
March	24.2	------	------	59	−34	.83	------	7.0	------	------	------	------	------	------	------	------	------
April	33.9	------	------	68	−17	.65	------	3.3	------	------	------	------	------	------	------	------	------
May	43.7	------	------	79	20	.85	------	T.	------	------	------	------	------	------	------	------	------
June	49.6	------	------	87	28	.92	------	0	------	------	------	------	------	------	------	------	------
July	53.6	------	------	81	27	2.16	------	0	------	------	------	------	------	------	------	------	------
August	53.9	------	------	79	25	3.39	------	0	------	------	------	------	------	------	------	------	------
September	46.0	------	------	89	11	3.06	------	0	------	------	------	------	------	------	------	------	------
October	32.4	------	------	60	−5	2.29	------	4.5	------	------	------	------	------	------	------	------	------
November	21.1	------	------	46	−27	2.12	------	9.4	------	------	------	------	------	------	------	------	------
December	12.7	------	------	45	−43	1.02	------	10.1	------	------	------	------	------	------	------	------	------
For year	33.3	------	------	89	−46	18.64	------	51.6	------	------	------	------	------	------	------	------	------

Prevailing winds: Northeast. Fog: December to February.

KETCHIKAN, SOUTHEAST ALASKA (Lat. 55°22′ N., Long. 131°43′ W.)

[Elevation, 75 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	31.5	36.3	26.5	55	−8	14.37	19	13.5	------	------	------	------	------	------	SE.	------	------
February	34.2	40.0	27.0	57	2	11.95	15	5.9	------	------	------	------	------	------	SE.	------	------
March	36.9	41.6	27.3	69	9	13.17	18	6.1	------	------	------	------	------	------	SE.	------	------
April	41.0	49.4	32.2	72	12	12.14	18	.9	------	------	------	------	------	------	SE.	------	------
May	50.6	54.8	36.6	93	25	8.33	16	1.2	------	------	------	------	------	------	S.	------	------
June	54.2	60.9	43.5	96	28	5.80	16	0	------	------	------	------	------	------	SE.	------	------
July	57.5	66.0	48.4	92	36	8.55	16	0	------	------	------	------	------	------	S.	------	------
August	57.8	65.2	49.3	84	34	13.02	17	0	------	------	------	------	------	------	SE.	------	------
September	52.9	61.3	44.6	80	28	12.16	20	0	------	------	------	------	------	------	SE.	------	------
October	45.8	50.6	39.0	68	24	21.19	27	0	------	------	------	------	------	------	SE.	------	------
November	39.0	44.0	32.8	62	11	20.78	25	2.1	------	------	------	------	------	------	SE.	------	------
December	35.7	37.1	28.0	58	0	16.14	22	10.3	------	------	------	------	------	------	SE.	------	------
For year	44.8	50.6	36.3	96	−8	157.60	229	40.0	------	------	------	------	------	------	SE.	------	------

Fog: Rare in spring and late fall. Ice: None except shore ice in midwinter.

KODIAK, KODIAK ISLAND (Lat. 57°47′ N., Long. 152°24′ W.)

[Elevation, 155 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with inch 0.01 or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity[1]	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	28.7	30.9	21.0	53	−9	4.82	------	10.7	------	------	------	------	------	------	NW.	4.7	------
February	31.1	36.8	25.9	58	−3	4.57	------	10.0	------	------	------	------	------	------	NW.	4.5	------
March	33.6	38.8	27.8	65	2	3.92	------	9.6	------	------	------	------	------	------	NW.	4.2	------
April	36.1	41.0	29.9	61	5	3.86	------	7.5	------	------	------	------	------	------	SE.	4.2	------
May	43.2	48.1	35.9	74	20	5.32	------	.5	------	------	------	------	------	------	NE.	4.3	------
June	50.2	56.5	43.7	82	30	4.68	------	T.	------	------	------	------	------	------	NE.	3.4	------
July	54.2	60.1	47.2	82	35	3.38	------	0	------	------	------	------	------	------	SE.	3.3	------
August	54.3	57.8	47.1	85	34	5.42	------	0	------	------	------	------	------	------	W.	3.5	------
September	49.5	53.7	42.0	77	26	5.59	------	.1	------	------	------	------	------	------	SE.	3.7	------
October	41.6	46.6	35.6	66	7	7.28	------	.8	------	------	------	------	------	------	NW.	3.9	------
November	34.6	37.7	28.4	54	−3	5.76	------	3.5	------	------	------	------	------	------	NW.	3.5	------
December	30.6	34.8	24.4	61	−12	6.43	------	6.7	------	------	------	------	------	------	NW.	4.2	------
For year	40.6	45.2	34.1	85	−12	61.03	------	49.4	------	------	------	------	------	------	NW.	4.0	------

[1] Beaufort scale. Fog, rarely except during June and July. Fog banks often hang out to sea when it is clear in the immediate vicinity of Kodiak.

LATOUCHE, PRINCE WILLIAM SOUND (Lat. 60°04′ N., Long. 147°55′ W.)

[Elevation, 45 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	------	------	------	42	1	11. 91	------	40. 3	------	------	------	------	------	------	N.	------	------
February	------	------	------	47	10	16. 03	------	37. 6	------	------	------	------	------	------	N.	------	------
March	------	------	------	51	10	7. 44	------	12. 8	------	------	------	------	------	------	N.	------	------
April	------	------	------	59	19	11. 44	------	15. 7	------	------	------	------	------	------	N.	------	------
May	------	------	------	69	27	5. 85	------	. 2	------	------	------	------	------	------	N.	------	------
June	------	------	------	78	36	2. 83	------	0	------	------	------	------	------	------	N.	------	------
July	------	------	------	82	40	6. 11	------	0	------	------	------	------	------	------	N.	------	------
August	------	------	------	73	40	14. 27	------	0	------	------	------	------	------	------	N.	------	------
September	------	------	------	71	35	21. 34	------	0	------	------	------	------	------	------	S.	------	------
October	------	------	------	59	22	18. 62	------	2. 3	------	------	------	------	------	------	N.	------	------
November	------	------	------	48	15	14. 06	------	15. 3	------	------	------	------	------	------	N.	------	------
December	------	------	------	44	9	16. 81	------	16. 9	------	------	------	------	------	------	N.	------	------
For year	------	------	------	82	1	146. 71	------	141. 1	------	------	------	------	------	------	N.	------	------

PRINCE RUPERT, BRITISH COLUMBIA (Lat. 54°20′ N., Long. 130°17′ W.)

[Elevation, 170 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity [1]	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	32	50	9	57	−6	9.5	19	------	------	------	------	7	------	0	E.	2	------
February	36	53	15	62	2	7.5	16	------	------	------	------	7	------	1	E.	2	------
March	38	54	21	67	11	9.1	20	------	------	------	------	7	------	0	E.	2	------
April	42	60	29	68	19	7.2	19	------	------	------	------	7	------	0	E.	2	------
May	48	70	34	85	30	5.2	17	------	------	------	------	7	------	1	W.	2	------
June	52	70	39	76	36	4.6	16	------	------	------	------	8	------	2	W.	1	------
July	56	73	45	83	40	5.2	15	------	------	------	------	8	------	4	W.	2	------
August	57	75	44	86	40	5.5	16	------	------	------	------	7	------	5	SE.	2	------
September	53	73	40	80	33	9.5	19	------	------	------	------	8	------	4	SE.	2	------
October	47	62	32	68	22	13.7	22	------	------	------	------	8	------	1	SE.	2	------
November	40	56	24	64	13	12.0	22	------	------	------	------	8	------	1	E.	3	------
December	36	53	18	63	10	11.5	20	------	------	------	------	7	------	0	E.	2	------
For year	45	[2] 76	[2] 6	86	−6	100.2	221	------	------	------	------	7	------	19	E.	2	------

[1] Scale 0 to 10.
[2] Mean of highest each year and lowest each year.

SELDOVIA, KENAI PENINSULA (Lat. 59°26′ N., Long. 151°43′ W.)

[Elevation, 20 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January				41	−10	3. 50		33. 1									
February				53	−4	5. 18		32. 8									
March				55	1	1. 12		11. 5									
April				59	0	2. 80		12. 8									
May				72	24	. 57		T.									
June				75	29	. 94		0									
July				79	38	1. 71		0									
August				76	33	3. 07		0									
September				65	27	8. 67		0									
October				55	16	5. 22		. 3									
November				49	6	2. 83		15. 0									
December				46	−5	6. 42		35. 3									
For year				79	−10	42. 03		140. 8									

Prevailing winds: Easterly in summer; southwesterly in winter. Fog: Occasionally during the summer. Its duration, without partially clearing, is generally short, although spells of generally foggy weather may last several days. Ice: None in Seldovia Bay.

SEWARD, KENAI PENINSULA (Lat. 60°06′ N., Long. 149°26′ W.)

[Elevation, 30 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	20. 5	25. 0	10. 8	48	−20	3. 40	------	21. 0	------	------	------	------	------	------	N.	------	------
February	27. 3	33. 2	19. 8	55	−14	4. 74	------	20. 3	------	------	------	------	------	------	N.	------	------
March	30. 9	36. 0	21. 8	52	−7	2. 96	------	9. 2	------	------	------	------	------	------	N.	------	------
April	37. 1	43. 5	29. 2	72	10	3. 83	------	7. 0	------	------	------	------	------	------	S.	------	------
May	44. 8	53. 5	36. 5	77	22	2. 67	------	T.	------	------	------	------	------	------	S.	------	------
June	50. 7	60. 2	43. 7	84	32	2. 30	------	0	------	------	------	------	------	------	S.	------	------
July	55. 6	63. 4	47. 6	88	40	2. 50	------	0	------	------	------	------	------	------	S.	------	------
August	53. 9	59. 8	46. 3	85	33	6. 55	------	0	------	------	------	------	------	------	S.	------	------
September	48. 6	55. 0	38. 6	84	27	10. 10	------	0	------	------	------	------	------	------	S.	------	------
October	39. 6	45. 3	33. 4	65	11	9. 79	------	. 5	------	------	------	------	------	------	N.	------	------
November	30. 1	35. 7	23. 1	58	5	6. 18	------	5. 5	------	------	------	------	------	------	N.	------	------
December	24. 5	28. 4	15. 5	53	−12	7. 85	------	16. 6	------	------	------	------	------	------	N.	------	------
For Year	38. 6	44. 9	30. 5	88	−20	62. 87	------	80. 1	------	------	------	------	------	------	N.	------	------

Due to the surrounding topography, the wind in Resurrection Bay almost invariably blows north or south, regardless of the wind outside.

SITKA, SOUTHEAST ALASKA (Lat. 57°03′ N., Long. 135°20′ W.)

[Elevation, 65 feet]

Month	Air temperature °F					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
				Extreme					Number of days								
	Mean	Mean maximum	Mean minimum	Highest	Lowest	Mean	Average number of days with 0.01 inch or more	Snowfall	Clear	Partly cloudy	Cloudy	Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
						Inches		*Inches*									
January	32. 3	36. 8	25. 5	56	−4	7. 76	17	14. 7	------	------	------	------	------	------	NE.	------	------
February	34. 4	40. 2	27. 8	58	−4	6. 26	15	9. 2	------	------	------	------	------	------	E.	------	------
March	36. 7	42. 9	29. 3	65	−1	5. 64	17	8. 2	------	------	------	------	------	------	E.	------	------
April	42. 5	47. 6	33. 4	70	6	5. 49	17	6. 1	------	------	------	------	------	------	E.	------	------
May	46. 7	53. 8	38. 6	80	28	3. 95	16	. 1	------	------	------	------	------	------	W.	------	------
June	51. 7	58. 2	43. 6	84	32	3. 15	14	0	------	------	------	------	------	------	W.	------	------
July	55. 0	61. 1	47. 1	87	34	4. 02	16	0	------	------	------	------	------	------	W.	------	------
August	55. 8	61. 5	48. 2	86	30	6. 95	18	0	------	------	------	------	------	------	W.	------	------
September	52. 0	58. 3	44. 7	80	28	10. 00	20	0	------	------	------	------	------	------	W.	------	------
October	46. 0	51. 6	39. 5	70	22	12. 05	23	T.	------	------	------	------	------	------	E.	------	------
November	38. 6	43. 4	32. 0	62	1	9. 34	20	2. 0	------	------	------	------	------	------	E.	------	------
December	35. 3	40. 2	30. 2	59	4	9. 01	20	12. 3	------	------	------	------	------	------	E.	------	------
For year	43. 9	49. 6	36. 7	87	−4	83. 62	213	52. 6	------	------	------	------	------	------	E.	------	------

Heaviest gales: During winter months northeast gales sometimes sweep across the harbor with considerable force. In southerly gales the sea is considerably felt in the harbor. In spring and summer, when easterly winds prevail outside Sitka Sound, they are nearly always found to blow northeast inside the sound.

SKAGWAY, SOUTHEAST ALASKA (Lat. 59°27′ N., Long. 135°19′ W.)

[Elevation, 30 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
				Extreme					Number of days								
	Mean	Mean maximum	Mean minimum	Highest	Lowest	Mean	Average number of days with 0.01 inch or more	Snowfall	Clear	Partly cloudy	Cloudy	Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
						Inches		*Inches*									
January	20.9	25.9	16.6	50	−21	1.72	12	10.2	------	------	------	------	------	------	N.	------	------
February	25.6	31.6	21.4	49	−13	1.37	10	4.8	------	------	------	------	------	------	N.	------	------
March	30.7	32.6	20.7	63	−10	1.39	4	1.7	------	------	------	------	------	------	N.	------	------
April	39.7	48.4	31.7	62	7	1.46	8	.8	------	------	------	------	------	------	S.	------	------
May	49.1	58.5	36.8	81	23	.82	6	T.	------	------	------	------	------	------	S.	------	------
June	55.7	66.7	43.7	90	29	.87	7	0	------	------	------	------	------	------	S.	------	------
July	58.3	68.8	47.8	92	36	1.30	8	0	------	------	------	------	------	------	S.	------	------
August	56.0	64.9	46.8	92	31	1.79	12	0	------	------	------	------	------	------	S.	------	------
September	49.8	60.1	41.3	77	20	3.50	11	0	------	------	------	------	------	------	S.	------	------
October	41.6	46.3	34.6	64	12	4.62	14	3.3	------	------	------	------	------	------	S.	------	------
November	32.2	35.6	26.2	56	−6	4.12	12	10.8	------	------	------	------	------	------	N.	------	------
December	25.7	27.0	17.3	57	−22	2.80	10	11.9	------	------	------	------	------	------	N.	------	------
For year	40.4	47.2	32.1	92	−22	25.76	114	43.5	------	------	------	------	------	------	S.	------	------

VALDEZ, PRINCE WILLIAM SOUND (Lat. 61°07′ N., Long. 146°16′ W.)

[Elevation, 10 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	17.5	24.7	10.6	50	−20	3.66	13	70.9							NE.		
February	21.6	30.0	13.6	48	−24	5.07	14	56.9							NE.		
March	24.7	33.4	15.6	52	−11	3.14	10	23.6							NE.		
April	33.9	43.0	24.3	63	4	3.21	12	26.8							NE.		
May	43.3	52.7	33.4	78	18	2.49	13	1.0							SW.		
June	51.1	59.0	42.6	78	30	1.99	13	0							SW.		
July	53.6	59.6	45.5	84	37	2.98	15	0							SW.		
August	51.2	59.1	43.4	84	29	5.52	20	0							SW.		
September	45.9	53.5	38.4	82	23	8.13	20	0							SW.		
October	37.3	43.6	31.3	62	11	6.10	19	3.9							NE.		
November	25.3	32.3	19.3	53	−4	3.55	13	28.4							NE.		
December	19.5	26.3	13.7	46	−18	6.39	16	62.4							NE.		
For year	35.4	43.1	27.6	84	−24	52.23	178	273.9							NE.		

WRANGELL, SOUTHEAST ALASKA (Lat. 56°28′ N., Long. 132°23′ W.)

[Elevation, 10 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme					Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest	Mean	Average number of days with 0.01 inch or more	Snowfall	Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	------	------	------	54	0	7. 65	21	19. 4	------	------	------	------	------	------	SE.	------	------
February	------	------	------	51	1	7. 44	16	9. 0	------	------	------	------	------	------	SE.	------	------
March	------	------	------	60	7	3. 83	18	8. 5	------	------	------	------	------	------	SE.	------	------
April	------	------	------	68	16	4. 16	17	1. 0	------	------	------	------	------	------	SE.	------	------
May	------	------	------	76	28	3. 93	19	. 5	------	------	------	------	------	------	SE.	------	------
June	------	------	------	84	33	2. 87	12	0	------	------	------	------	------	------	SE.-W	------	------
July	------	------	------	87	38	3. 29	14	0	------	------	------	------	------	------	SW.	------	------
August	------	------	------	85	38	5. 70	16	0	------	------	------	------	------	------	SE.-W	------	------
September	------	------	------	77	31	9. 77	16	0	------	------	------	------	------	------	SE.-W	------	------
October	------	------	------	64	20	9. 27	22	0	------	------	------	------	------	------	SE.	------	------
November	------	------	------	62	11	12. 27	20	3. 1	------	------	------	------	------	------	SE.	------	------
December	------	------	------	60	0	8. 17	18	19. 4	------	------	------	------	------	------	N.	------	------
For year	------	------	------	87	0	78. 35	209	60. 9	------	------	------	------	------	------	SE.	------	------

YAKUTAT BAY, SOUTHEAST ALASKA (Lat. 59°34′ N., Long. 139°45′ W.)

[Elevation, 5 feet]

Month	Air temperature °F.					Precipitation			Cloudiness				Sunshine, percentage possible	Number of days fog	Winds		
	Mean	Mean maximum	Mean minimum	Extreme		Mean	Average number of days with 0.01 inch or more	Snowfall	Number of days			Cloud amount scale, 0 to 10			Prevailing direction	Average velocity	Maximum velocity
				Highest	Lowest				Clear	Partly cloudy	Cloudy						
						Inches		*Inches*									
January	27.1	32.3	23.4	43	8	10.48	------	30.0	------	------	------	------	------	------	SE.	------	------
February	30.5	35.2	27.0	45	11	9.39	------	23.8	------	------	------	------	------	------	SE.	------	------
March	29.4	35.6	23.7	44	9	5.78	------	18.2	------	------	------	------	------	------	SE.	------	------
April	37.4	42.9	31.9	60	13	6.29	------	14.7	------	------	------	------	------	------	W.	------	------
May	42.7	49.7	35.7	65	26	6.52	------	T.	------	------	------	------	------	------	W.	------	------
June	50.0	56.3	43.8	71	36	3.78	------	0	------	------	------	------	------	------	SE.	------	------
July	52.8	58.0	47.5	71	39	6.70	------	0	------	------	------	------	------	------	SE.	------	------
August	52.6	58.1	47.1	70	39	13.41	------	0	------	------	------	------	------	------	W.	------	------
September	48.1	54.2	42.1	66	32	12.09	------	0	------	------	------	------	------	------	SE.	------	------
October	41.2	45.8	36.5	63	24	15.07	------	1.9	------	------	------	------	------	------	SE.	------	------
November	33.7	39.5	29.3	50	12	13.37	------	10.0	------	------	------	------	------	------	SE.	------	------
December	28.9	33.0	24.8	48	3	12.40	------	18.9	------	------	------	------	------	------	SE.	------	------
For year	39.5	45.0	34.4	71	3	115.28	------	117.5	------	------	------	------	------	------	SE.	------	------

Ice: Ice comes from the glaciers at the head of the bay. Usually quite thick from Point Latouche to Nunatak Fiord, while at times it is scarce. Ordinarily it banks on western shore as far south as Blizhni Point. Occasional pieces find their way as far south as Ocean Cape and Point Manby and scattering pieces are usually found in the body of the bay.

Name_____

Weather element	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Temperature													
Mean monthly													
Mean maximum													
Mean minimum													
Highest recorded													
Lowest recorded													
Sea water													
Precipitation													
Monthly amount													
Number of hours per month													
Number hours, daytime (0600–1800)													
Number of days with 0.01 inch or more													
Number of days with snow													
Fog													
Number of days with fog													
Number hours, daytime (0600–1800)													
Number of hours—night (1800–0600)													
Clouds													
Average amount—in tenths													
Upper clouds, day, average amount in tenths													
Upper clouds, night, average amount in tenths													
Lower clouds, day, average amount in tenths													
Lower clouds—night													
Number of days clear (0–3/10 cloud cover)													
Partly cloudy (3/10–7/10 cloud cover)													
Cloudy (7/10–10/10 cloud cover)													
Thunderstorms													
Number—day													
Number—night													
Total during month													
Winds													
Prevailing direction—day													
Prevailing direction—night													
Average velocity—day													
Average velocity—night													
Highest hourly velocity, month													
Highest gust during month													
Favorable flying weather													
Average hours and percent—day													
Average hours and percent—night													
Average hours per day and percent													

Name_____

Weather element	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Temperature													
Mean monthly													
Mean maximum													
Mean minimum													
Highest recorded													
Lowest recorded													
Sea water													
Precipitation													
Monthly amount													
Number of hours per month													
Number hours, daytime (0600–1800)													
Number of days with 0.01 inch or more													
Number of days with snow													
Fog													
Number of days with fog													
Number hours, daytime (0600–1800)													
Number of hours—night (1800–0600)													
Clouds													
Average amount—in tenths													
Upper clouds, day, average amount in tenths													
Upper clouds, night, average amount in tenths													
Lower clouds, day, average amount in tenths													
Lower clouds—night													
Number of days clear (0–3/10 cloud cover)													
Partly cloudy (3/10–7/10 cloud cover)													
Cloudy (7/10–10/10 cloud cover)													
Thunderstorms													
Number—day													
Number—night													
Total during month													
Winds													
Prevailing direction—day													
Prevailing direction—night													
Average velocity—day													
Average velocity—night													
Highest hourly velocity, month													
Highest gust during month													
Favorable flying weather													
Average hours and percent—day													
Average hours and percent—night													
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ICE

General.—Ice will seldom be encountereed south of Unimak Pass (54°20′ N., 165°10′ W.) it occurs locally where discharged from glaciers, and in winter is formed at the head of the various inlets, but never gets far from its source. Its occurrence, and also the ice in Bering Sea, are discussed in detail under the headings of the various localities.

All ports in Alaska except those in Bering Sea and at the upper end of Cook Inlet, are ice free and open to sea navigation the year around.

SOUTHERN AND SOUTHEASTERN ALASKA

Frederick Sound (57°10′ N., 134°00′ W.).—Glacial ice in small quantities is generally present in the eastern arm of Frederick Sound, coming from Le Conte Bay, where at times there are enormous quantities. It generally follows the north shore as far as the entrance to Thomas Bay. With some conditions of wind and weather, ice may be expected as far as Sukoi Islands. It is sometimes seen at Cape Strait, and a piece has been seen at Turnabout Island. Occasionally a few stray pieces work into Wrangell Narrows as far as Green Point. The size of the pieces is sufficient to make them dangerous.

Holkham Bay (57°45′ N., 133°40′ W.).—Ice is discharged by glaciers in both Tracy and Endicott Arms, and is always present in Holkham Bay, sometimes in large quantities, and is prevalent in Stephens Passage off the entrance to the bay in greater or less quantities. This ice is dangerous at night or in thick weather to surface craft, and in entering Tracy or Endicott Arms care should be taken when near the ice, as the swirls are often bad.

Taku Inlet (58°20′ N., 134°05′ W.).—Taku Glacier discharges an enormous quantity of ice into the inlet, and this ice is always present, sometimes in large quantities, and is also present at Stephens Passage off the entrance. In daytime with clear weather it is not a serious menace to sea navigation.

Icy Strait (58°20′ N., 135°50′ W.).—Glacial ice from Glacier Bay is prevalent in the strait in varying quantities throughout the year.

Glacier Bay (58°40′ N., 136°00′ W.).—Beginning in September, Glacier Bay is frozen during the winter as far down as Willoughby Island. The greatest amount of floating ice is found in the spring, and it lessens as the season advances. In June the ice in front of the glaciers, as seen from mountains farther down, appears to be solid at the head of the bay. More ice comes down the bay on the large tides than the small, and winds also exert a marked influence on the ice movements.

Usually the great mass of ice from Muir Glacier is congested in Muir Inlet and out into the bay to South Marble Islet, leaving the southwest shore from Willoughby Island to Hugh Miller Inlet comparatively free from ice.

The ice from Brady, Johns Hopkins, and Grand Pacific Glaciers is usually congested in Reid Inlet, and thence drifts along the south shore of Hugh Miller Inlet. Here it sets across toward the north shore.

Cross Sound (58°10′ N., 136°30′ W.).—Glacial ice in varying quantities is prevalent in Icy Strait and Cross Sound throughout the year. The ice comes from Glacier Bay, and the most of it is usually found at Glacier Bay entrance and from there to Inian Islands. It is often quite thick in Cross Sound and has been seen 10 to 15 miles seaward of Cape Spencer and as far eastward as Point Augusta. Ice at times piles up heavily along the shore from Point Adolphus to Eagle Point.

Yakutat Bay (59°40′ N., 140°00′ W.).—The ice in Yakutat Bay comes from Turner and Hubbard Glaciers at the head of Disenchantment Bay and from Nunatak Glacier at the head of Nunatak Fiord. It is usually quite thick from Point Latouche to Nunatak Fiord, while at times it is scarce. Ordinarily it banks on the western shore of the bay as far south as Blizhni Point. Occasional pieces find their way as far south as Ocean Cape and Point Manby, and scattering pieces are usually found in the body of the bay.

Icy Bay (59°55′ N., 141°30′ W.).—In the southern part of the bay ice is never thick enough to menace sea navigation. Large bergs either melt or ground before getting very far from the face of the glacier. The eastern shore is generally free from ice except during the spring tides. The shore north of Claybluff Point is invariably covered with stranded ice. Riou Bay is usually free from ice.

Prince William Sound (60°30′ N., 146°00′ W.).—Glacial ice is rarely found in the open waters of Prince William Sound. Ice is discharged by Columbia Glacier, northward of Glacier Island, and is driven into the sound by northerly winds; it may be expected, depending on the winds, from Bligh Island to Bald Head Chris Island and as far south as Storey Island.

There are numerous discharging glaciers in Port Wells, the northwest arm of the sound, but the ice rarely reaches the entrance of the port. There is a discharging glacier at the head of Blackstone Bay, but the ice is confined to the bay.

Ice is discharged by Chenega Glacier on the southwest side of the sound, and occasionally drifts eastward as far as Point Helen and the north entrance of Latouche Passage through the passage south of Chenega Island.

During very cold weather ice sometimes forms in the arms of the sound which reach well into the mountains.

Considerable glacial ice has been seen in the passage south of Pleiades Islands. It comes westward between Point Countess and Chenega Islands, and drifts eastward as far as Latouche Passage with the ebb.

Aialik Bay—Kenai Peninsula (59°50′ N., 149°43′ W.).—There are discharging glaciers at the head of Aialik Bay and Holgate Arm, and ice is frequently driven to Harbor Island by northerly winds. Holgate Arm and the entire bay above the bar are frequently filled with ice.

Nuka Bay—Kenai Peninsula (59°20′ N., 150°30′ W.).—Ice in East Arm is thickest after spring tides and with northerly breezes will be set into the main part of Nuka Bay, into the entrance of West Arm and even into Nuka Passage. With southerly breezes the ice will pack up at the head of East Arm, leaving the main part of the arm clear. With easterly or westerly breezes, the ice will pack along the opposite shore, leaving the main part of the bay and lee shore free.

Cook Inlet (59°00′ N., 153°00′ W.).—The upper part of the inlet is more or less obstructed by floating ice, which forms on the flats and in the shallower waters from December to April. The determining factor is the severity of the winter, which varies greatly from year to year.

During a severe winter or after a considerable period of severe cold such a course is not feasible; full-powered vessels could probably reach the head of the inlet even at such times but, because of the heavy masses of ice floating in the strong currents, would find it impracticable to discharge to lighters, either when lying at anchor or drifting with the current.

Ice does not generally interfere with sea navigation southward of Anchor Point except on the western side of the inlet, where large fields of it are sometimes carried by wind and tide as far as Augustine Island (destroyed 1933), closing Iliamna Bay for brief periods.

Alaska Peninsula.—All harbors on the south side of the peninsula are free from ice.

Isanotski Strait—Alaska Peninsula (54°50′ N., 163°20′ W.).—As a usual thing, the strait is open to sea navigation throughout the winter season, but during the winter 1923–24 the pass was entirely blocked with ice and the mail steamer could not get beyond Sankin Island. At this time there was drift ice from Cape Pankof to Sanak Island, a very unusual condition.

BERING SEA REGION

Except in bays and sheltered places, the ice of Bering Sea is detached fields, floes, and cakes, which are continually kept in motion, breaking up, piling, and telescoping by the action of variable winds and currents. At no time is the sea one solid sheet of ice, and in the winter, while it is forming, it is more scattered than in the spring, when the northerly movement has begun and it packs closer together. The general southern limit of ice is from Bristol Bay to the vicinity of St. George Island, and thence about west-northwest to the Siberian shore. The southern edge is ragged and very much scattered, and

continued northerly winds sometimes drive fields of it far southward. As a rule, no heavy ice will be encountered south of the Pribilof Islands, and the ice in their vicinity is likely to be nothing more than detached fields.

Reports have been received that Bristol Bay is usually free from heavy ice between the middle of May and June 10. It is within reason to believe that some years Bristol Bay is open to sea navigation all winter, though the rivers and sheltered bays are closed.

In 1925 the ice on the river broke on May 23 and went out at Eek Island on May 29. On June 5 large pieces of ice were encountered just below the mouth of the river. Local residents stated that this was the latest the river has been clear of ice for the last 15 years.

In the spring, beginning with April, there is a general northward movement of the ice, the shores clearing ahead of the center of the sea; but it sometimes hangs in the bays and around the islands later than in the open sea. Seasons vary, the movement and position of the ice depending greatly on the direction of the winds. Generally, however, by June 1 the whole body of ice is well up with St. Lawrence Island, and a passage opens to its west side. The eastern side of the sea is likely to be obstructed a little later than the western side, and ice is often met between St. Lawrence Island and Nunivak Island in the early part of June. The breaking out of the rivers toward the latter part of May clears the shores, but the ice is likely to hold in Norton Sound several weeks later.

Strips of ice are encountered in Norton Sound as late as July 10. The ice is likely to be heaviest and to remain the longest on the north shore. In general, it is the last of June before that part of the sound is altogether clear.

In the fall, young ice begins to form on the rivers, and in the bays and sheltered places after October 1, and grows stronger and spreads according to the severity of the advancing season.

The delta of the Yukon opens usually near the end of May or early in June and closes in the latter part of October or early in November. The bay at St. Michael and the roadstead at Nome do not usually open until June and close late in October or during the first half of November. As in the case of Bristol Bay, the disappearance of the ice from Norton Sound is controlled largely by the direction of the wind.

Unalaska Bay (53°55′ N., 166°30′ W.).—The bay is open to sea navigation at all seasons. It is reported that on two occasions the drift ice of Bering Sea entered Unalaska Bay, but such an occurrence is so rare that it need not be considered. Ice often forms in the sheltered coves and harbors in cold, calm weather, but it never attains any thickness.

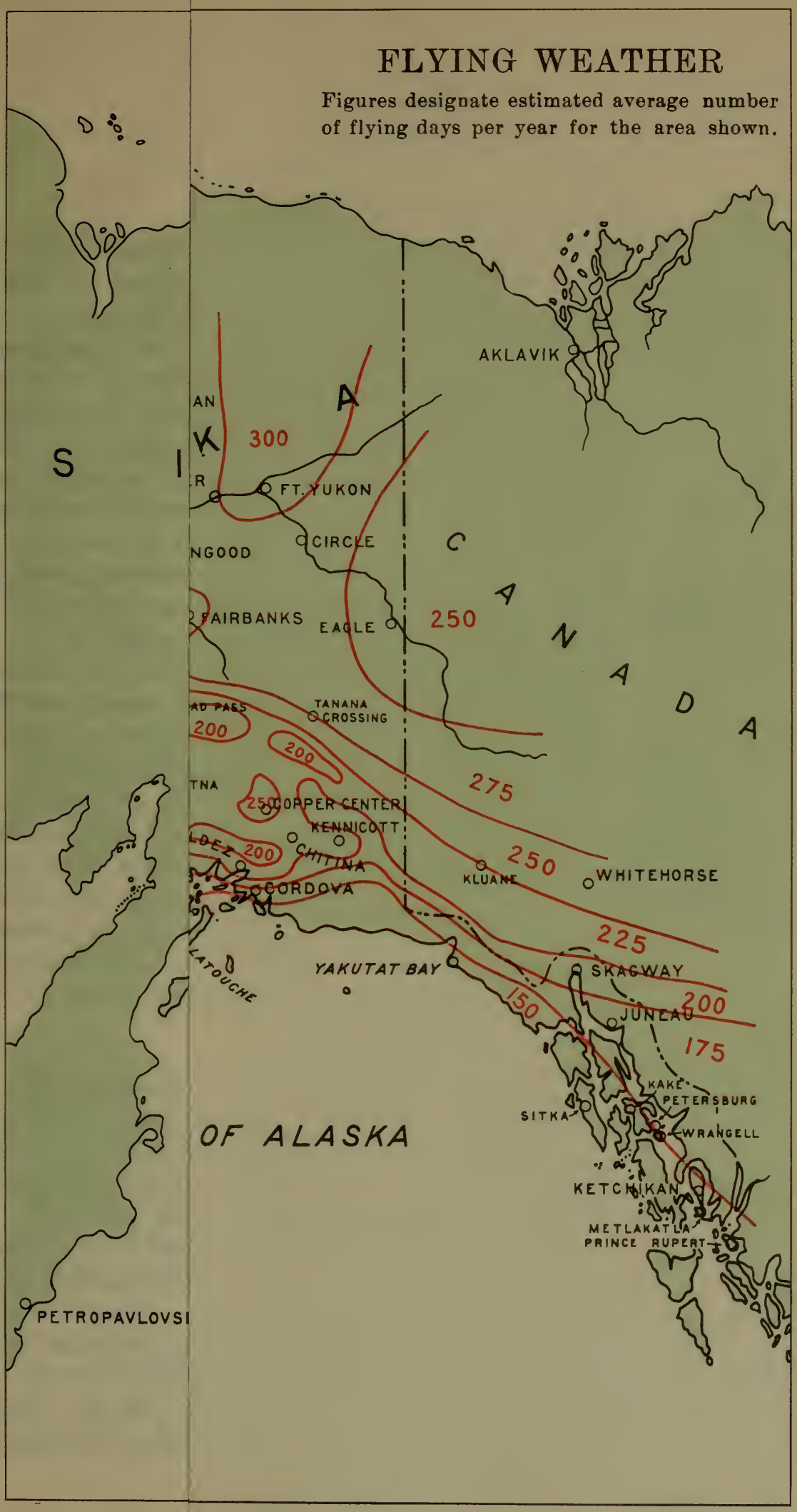
Kvichak Bay—Bristol Bay (58°30′ N., 158°00′ W.).—Ice is sometimes encountered in Bering Sea soon after passing through Unimak

Pass. At times this is quite extensive, and if held by the winds will cause considerable delay to vessels in reaching anchorage in Kvichak Bay. In 1911 vessels were unable to proceed from the ship anchorage off Naknek River toward Kvichak River until June 1, as the ice had not broken up in the river until that date.

Nushagak Bay (58°30′ N., 158°30′ W.).—Nushagak Bay is usually open to sea navigation the latter part of May, but the movement of the ice is variable, depending on the direction of the wind. Northeast winds drive it out of the bay. It is not known when ice begins to form, but it is probably late in the fall.

Kuskokwim Bay (59°00′ N., 162°00′ W.).—The river is usually open for sea navigation by June 1, although ice conditions are uncertain and vary much from year to year. In the fall, ice makes on the upper river in October, and heavy ice forms off Goodnews Bay in November. Goodnews Bay freezes over entirely in the winter.

In 1924 the river ice broke up on May 23, and went out at Eek Island on May 29. Large pieces of ice were encountered on June 5 just below Eek Island. This is reported as being the latest break-up in 15 years.


FLYING WEATHER
Figures designate estimated average number of flying days per year for the area shown.
AKLAVIK
FT. YUKON
CIRCLE
FAIRBANKS
EAGLE
TANANA CROSSING
COPPER CENTER
KENNICOTT
CHITINA
CORDOVA
KLUANE
WHITEHORSE
YAKUTAT BAY
SKAGWAY
JUNEAU
KAKE
PETERSBURG
SITKA
WRANGELL
KETCHIKAN
METLAKATLA
PRINCE RUPERT
PETROPAVLOVSI
OF ALASKA
CANADA
300
250
275
250
225
200
150
175
200
200
200
250


FLYING WEATHER
Figures designate estimated average number of flying days per year for the area shown.
WRANGELL I.
BARROW
SIBERIA
ALASKA
CANADA
AKLAVIK
WISEMAN
BETTLES
KOTZEBUE
ALLAKAKET
BEAVER
FT. YUKON
CANDLE
DEERING
LIVENGOOD
CIRCLE
TANANA
NULATO
KOKRINES
RUBY
FAIRBANKS
EAGLE
NENANA
NOME
NORTON SOUND
LAKE MINCHUMINA
C. CHAPLIN
ST. LAWRENCE I.
C. NAVARIN
OBROOK PASS
TANANA CROSSING
MC GRATH
IDITAROD
FLAT
CROOKED CREEK
GULKANA
COPPER CENTER
KENNICOTT
VALDEZ
CHITINA
ANCHORAGE
BETHEL
SEWARD
CORDOVA
KLUANE
WHITEHORSE
DILLINGHAM
YAKUTAT BAY
SKAGWAY
PT. CHATHAM
NAKNEK
BRISTOL BAY
KODIAK
UGASHIK
PRIBILOF IS.
WIDE BAY
CHIGNIK
JUNEAU
KAKE
PETERSBURG
SITKA
WRANGELL
KETCHIKAN
METLAKATLA
PRINCE RUPERT
BERING SEA
GULF OF ALASKA
NIKOLSKI RO.
KOMANDORSKI IS.
PETROPAVLOVSK
ATTU I.
KISKA I.
ADAK I.
ATKA I.
UMNAK I.
UNALASKA I.
NIMAK I.
250
300
225
250
275
250
225
200
175
200
200
200
200
200
150
175
150

CHAPTER IV

AIR ROUTES

COASTAL

From Seattle, Wash., to Ketchikan, Alaska, the regular steamer route is usually followed via the inside passage, due to the fact that it is generally over well-protected water and in case of a forced landing, assistance would be more readily available. However, when the weather is sufficiently clear to permit the flight to be made at an altitude of 5,000 feet, it is recommended that the line of flight be laid to cut across Cape Caution (51°10′ N., 127°47′ W.), the northern entrance point of Queen Charlotte Sound, which is indented with numerous inlets offering excellent shelter in case of a forced landing.

A direct route is followed from Ketchikan to Juneau which closely follows the steamer route.

To points westward of Juneau, a coastal route is usually followed.

From Prince Rupert, British Columbia, to Sitka the coastal route crosses the lower end of Prince of Wales Island and Baranof Island. These islands possess high mountain peaks, some of which reach an altitude of approximately 4,500 feet.

Leaving Sitka the route follows the coast to Cordova. The bays and harbors along the coast are practically unsheltered, with the exception of Lituya and Yakutat Bays, which afford protected anchorage with ample landing and take-off area. Westward of Yakutat there are many glaciers which reach the sea in the indentations and bays of the coast. In the summer a great deal of ice in small patches floats within a belt about 10 miles from the coast.

To points westward of Cordova, a coastal route is usually followed.

ALASKA PENINSULA

The southern coast of the Alaska Peninsula is irregular and broken by numerous bays affording anchorages. Many of its points are rugged cliffs of great height, while others are low. The mountains on the peninsula are high, irregular, and bold.

There are numerous off-lying islands and groups of islands which afford good harbors on their coasts. Many settlements, canneries, and fishing stations are scattered along the coast and among the off-lying islands.

Particularly good landmarks on the Alaska Peninsula are:

Mount Douglas, 7,064 feet, and Fourpeaked Mountain, 6,903 feet high, are two snow-covered mountains lying west and southwest, respectively, from Cape Douglas (58°51′ N., 153°17′ W.).

Devils Desk (6,421 feet), Kukak Volcano, Mount Stellar (7,535 feet), and Mount Denison are a group of high snow-covered peaks on a ridge lying about 10 miles northwestward from Kukak Bay (58°18′ N., 154°16′ W.).

Katmai Volcano, 7,500 feet high, lies 17 miles north of Katmai Bay (58°00′ N., 154°57′ W.), is often smoking; the steam and smoke generally hang over the vicinity. It is part of a high ridge and is not easily distinguishable unless smoking.

Mageik Volcano, 7,250 feet high, lies about 10 miles southwestward from Katmai Volcano. It has a more definite summit that is distinguishable.

Mount Kubugakli, a prominent mountain with two summits, rises rapidly from Cape Kubugakli (57°52′ N., 155°06′ W.). The southerly peak is the highest 2,920 feet.

Pavlof Volcano, 8,900 feet in height, is the most prominent on the peninsula, and has three peaks, lying in a general north and south line, the middle one being the highest. These peaks are symmetrical, and smoke is frequently seen issuing from the central one.

INTERIOR PRINCIPAL AIR ROUTES

Although outside the area covered by this publication, a brief description of the principal interior air routes follows:

SEATTLE—FAIRBANKS

This airway follows in general the coast line from Seattle to Bellingham, thence to Chilliwack, British Columbia. From Chilliwack the route follows the Fraser River Valley passing over Hope, Lytton, Lillooet, Gang Ranch, Comer, and Quesnell; thence to Hulatt, passing over Blackwater. From Hulatt the route is over Stuart Lake, Takla Lake to Bear Lake, thence to Teslin Lake, passing over the mountain range at 10,000 feet. From Teslin Lake along the Teslin River to a point halfway between Hootakingua and Lower Laberge, thence to Fairbanks via Carmachs, Yukon Crossing, Thistle Creek picking up the Tanana River in approximately latitude 64° longitude 145°.

FAIRBANKS—BETHEL

This airway follows the Tanana River from Fairbanks to Nenana, thence over the open valley of Kantishna and down the upper Kuskokwim Valley to McGrath. From McGrath the route crosses low mountains to Flat and Crooked Creek, thence over the open valley of the lower Kuskokwim to Bethel.

Terrain.—Between Faibanks and Nenana the route follows the valley of the Tanana River and just south of a low range of mountains which parallels the river. To the south of the airway is a wide expanse of flat land extending 20 to 30 miles southward to the Alaska Range. The mountains to the north are wooded on their lower slopes and the flat lands to the south are partially in timber and partially in swamp and contain some lakes of various sizes.

The Tanana River on this section is fairly wide, flows with a moderate to fairly swift current and affords reasonably safe seaplane landings in summer and ski landings on the ice in winter.

In this section no safe landings are available for landplanes except on river bars during low water in the summer.

From Nenana the route follows the great open valley of the Kantishna River to Lake Minchumina. This valley is almost entirely flat, partly in timber and partly open country. In the first 30 miles west of Nenana, few lakes exist, but the remainder of the distance to Lake Minchumina there are many lakes of different sizes. In this section of the route, except for that small portion immediately west of Nenana, emergency landings can be made in the lakes with seaplanes at intervals of not more than 5 miles, and in winter ski landings are possible in all these lakes. No landplane facilities exist except on the river bars in the Kantishna River at low water.

From McGrath the route crosses a series of low mountain ranges to Flat and Iditarod. The mountains in this area are of comparatively low elevation and with the valleys in timber. Few natural facilities exist in this area for safe landings on pontoons, skis, or wheels, although more facilities exist during the winter for emergency landings on skis.

Between Flat, Iditarod, and Crooked Creek virtually the same conditions exist.

From Crooked Creek to Bethel the route follows the wide flat valley of the lower Kuskokwim, which is partially timber as far west as Akiak. Safe seaplane landings are available in this area in the Kuskokwim River or on lakes at intervals of 5 miles or less, and in the winter safe landings on skis are similarly available. Safe landings for landplanes are available only on occasional river bars in low water.

Seaplane facilities.—Seaplane facilities at Fairbanks exist in a slough of the Tanana River, but owning to the limited length of straight stretches of the slough and its shallowness, seaplane operations are necessarily limited to light seaplanes or seaplanes of moderate size lightly loaded. Fair facilities exist in the Tanana River at Nenana for seaplanes of moderate size if flown by experienced pilots. Excellent natural facilities for moderate-size seaplanes are available at McGrath, Crooked Creek, and Bethel. Fair facilities for moderate-size seaplanes are available at Iditarod.

Landplane facilities.—Fairbanks Airport, south edge of city. Size: Two landing strips, WNW./ESE., 2,000 by 400 feet; NW./SE.,

2,000 by 400 feet. Facilities: Hangar, specification fuel and oil, repairs. Remarks: Adequate for day operations for all types of planes.

Nenana, southeast edge of town. Small territorial field adequate for light planes flown by experienced pilots. Lake Minchumina, small territorial field, unsafe for any kind of operations.

McGrath, east edge of town. Fairly satisfactory territorial field, adequate for operations of planes of moderate size flown by experienced pilots.

Flat, 2½ miles north of town. Fairly satisfactory territorial field adequate for the operations of moderate-size planes. Good-machine shop facilities in town.

Crooked Creek and Bethel, natural river bar fields are available at low tide during summer.

Ski facilities.—Facilities for operation on skis are good at Fairbanks Airport, fair from the river ice at Nenana and Iditarod, excellent from the ice in Lake Minchumina, good from the river ice at McGrath, Crooked Creek, and Bethel. Fair from the field at Flat.

Weather conditions.—Good flying weather averages about 275 days a year, gradually decreasing to the westward until about 200 days of good flying weather a year are available at Bethel.

The worst weather conditions are to be found in the western 100 miles of the route between Crooked Creek and Bethel, which area is subject to bad conditions of the ocean influence and to high winds prevalent because of steep gradients near the center of the permanent low-pressure area of the Aleutians in winter.

The most difficult portion of the airway to fly from the point of view of weather is the area between McGrath, Flat and Crooked Creek, as when ceilings prevail which are of sufficient height to permit flying the rest of the route, the clouds will be down to the summits of the mountains in this area. When this area is close in flying can be conducted between McGrath and Crooked Creek by following the Kuskokwim River.

The amount of snowfall increases from east to west, being about 40 inches at Fairbanks and 60 inches at Bethel.

Rivers freeze during the month of October and by November 1 there is usually sufficient snow at Fairbanks and the ice is sufficiently thick at Bethel so that operations may be transferred to skis early in November and conducted on skis until the latter part of April.

Ice breaks up in the rivers and the snow disappears from Fairbanks during the early part of May, so that all waterways are usually clear of ice before the first of June.

During the freeze-up in the fall and during the thaw in the spring the river and lake conditions are such to prevent either ski or pontoon operations, and fields are so soft as to limit operations on wheels considerably.

Airway follows the Tanana River via Nenana and Hot Springs to its junction with the Yukon River at Tanana and thence follows the Yukon River to Nulato. From Nulato the airway crosses 90 miles of mountainous territory and then follows the south coast of the Seward Peninsula to Nome.

Terrain.—The terrain conditions between Fairbanks and Nenana are stated under the Fairbanks–Bethel Airway.

West of Nenana and for half the distance to Hot Springs the airway crosses flat open valley country partially in timber and partially swampy and dotted with several lakes. To the north extend several miles of open country in the bend of the Tanana River, while to the south stretches the wide valley of the Kantishna for a distance of 60 to 70 miles to the Alaska Range.

Halfway between Nenana and Hot Springs, the airway again picks up the Tanana River and follows it into Hot Springs with low hills to the north and open valley country to the south.

From Hot Springs to Tanana the airway parallels the southern edge of a comparatively low range of hills for several miles, with the valley of the Tanana taking quite a deep bend to the south, but with the open country of the valley immediately to the south of the airway, in which landings can be made with pontoons in summer, with skis in winter and with wheels in summer on river bars at low stages of the river.

From Tanana to Ruby the airway follows the valley of the Yukon, with mountains of moderate elevation to the north of the river and open flat country for several miles to the south of the river. The mountains to the north of the river have their lower slopes covered with tree growth and to the south the valley is dotted with many lakes, so that seaplane landings can be safely made anywhere along the river in the summer and ski landings can be made on the ice in winter. Wheel landings are confined to the river bars in summer.

Between Ruby and Nulato generally the same terrain conditions prevail as between Tanana and Ruby with mountains to the north of the river and open valley country to the south.

Immediately west of Nulato the airway crosses mountainous country to the shores of Norton Bay, a distance of about 90 miles, in which no safe seaplane landings are available nor are there any areas where safe landings on wheels can be made. Reasonably safe ski landings can be made in several places in this area during the winter in deep snow.

After crossing the neck of Norton Bay the route follows the shore line for about 15 miles and then crosses the southern extremity of the Darby Mountains, crosses the head of Golovin Sound, thence generally follows the low rolling tundra of the coast to Nome.

Reasonably safe seaplane landings may be made in Norton Bay, Golovin Sound and Safety Bay, wherein protected anchorages and beaching facilities are available. Reasonably safe landings in landplanes may be made at several places along the beach in Norton Bay and Norton Sound; during the winter reasonably safe ski landings can be made either on the ice of the river or along the beach.

Landplane facilities.—Small territorial fields exist at Hot Springs and Tanana, adequate only for light planes flown by experienced pilots.

The small territorial field at Nulato is unsafe for any type of plane and cannot be improved. A fairly satisfactory territorial field exists at Ruby, is adequate for unlimited operations if large planes are flown by experienced pilots familiar with the field.

The territorial field at Nome is of moderate size and reasonably safe for light planes and moderately safe for medium-size planes flown by experienced pilots familiar with the field. This field can be considerably improved.

Seaplane facilities.—Fair facilities exist in the Tanana River for seaplanes of moderate size if flown by experienced pilots.

Facilities at Hot Springs are available in a small slough immediately adjacent to the town, which is reasonably safe for light seaplanes, or in the Tanana River 2 miles below for the heavier seaplanes.

Good facilities for landings and take-offs of all but the largest seaplanes are available at Tanana, Ruby, and Nulato.

No seaplane facilities exist at Nome except in the open roadstead of Norton Sound in calm weather. At Safety Bay, 15 miles east of Nome, unlimited seaplane operations may be safely conducted.

Ski facilities.—Ski facilities during the winter are fair from the river at Hot Springs, and are good from the ice in the river at Tanana, Ruby, and Nulato.

At Nome unlimited ski operations may be conducted from the snow-covered tundra immediately adjacent to the town.

Weather conditions.—The number of flying days per year decreases gradually from Fairbanks west to Nome, there being approximately 275 flying days per year at Fairbanks, 250 flying days at Ruby, and 225 flying days at Nome.

The worst weather conditions are to be encountered west of the summit of the mountains which lie between Nulato and Norton Sound. When low ceilings generally prevail over the western portion of the airway the summit of this range of mountains will be in the clouds, making overtop flying the only means of getting through with the attendant danger of redescending through the clouds after crossing the mountains without definite knowledge of exact location.

Fogs are more prevalent in the Norton Sound area, and as a result visibilities are generally low. In the eastern section of the airway, fogs during the fall months are moderately prevalent.

Between Fairbanks and Nulato operations can be conducted with reasonable safety with ceilings of 300 feet and visibilities of three quarters of a mile with seaplanes in summer or skis in winter by following closely to the course of the river.

The rivers freeze during the month of October and by November 1 there is usually enough snow on the Fairbanks Field and in the tundra at Nome so that operations may be transferred to skis and continued on skis until the latter part of April over the entire route.

The ice breaks up in the rivers and the snow disappears from the Fairbanks Field and the tundra at Nome usually during the early part of May, so that all waterways are usually clear of ice before June 1, at which time operations can be transferred to pontoons or wheels.

During the freeze-up in the fall and during the thaw in the spring the river and lake conditions are such as to prevent either ski or pontoon operations, and fields are so soft as to limit operations on wheels considerably.

Mean summer temperatures are highest at the eastern end of the route and decrease gradually to the western end. Inversely, winter temperatures are coldest at the eastern end and increase gradually toward the western end.

ANCHORAGE—McGRATH

This airway follows on almost a straight line from Anchorage to McGrath, crossing the Alaska Range at Rainy Pass.

Terrain.—After leaving Anchorage, Cook Inlet is crossed over a width of about 2 miles. The airway then crosses the lower portion of the Susitna Valley over flat open land of low elevation dotted with many lakes in which seaplane landings can be made in summer and on which ski landings can be made in winter. In this area landings on wheels cannot be safely made except on a small field in an island in the Susitna River.

West of Susitna for a distance of 40 miles the route skirts the northern edge of low mountains with open flat country to the north in which there are many lakes affording reasonably safe seaplane landings in summer and safe ski landings in winter. In this area no safe landings can be made with land planes.

About 40 miles west of Susitna the airway reaches the upper portions of Skwentna River, which it follows almost to its headwaters, and enters the mountains of the Alaska Range in a canyon valley approaching Rainy Pass. In this narrow valley there are located three lakes on which seaplane landings can be made during summer and ski landings in winter. The backbone of the Alaska Range is reached at Rainy Pass which is of moderate elevation, very narrow with many sharp turns, and should never be flown on account of violent down-drafts and the fact that if cloudiness is encountered in the pass it is impossible to turn around. There is an alternate pass,

locally known as Ptarmigan Pass, which is U shape, to the south of the airway. This pass is 2 to 3 miles wide and with no very sharp turns so that it can be flown with safety when ceilings are below the summit of the mountains, as it is possible to turn planes around in pass if necessary.

On crossing the mountains, either directly over Rainy Pass or around Ptarmigan Pass, the headwaters of the south fork of the Kuskokwim River are reached in the opposite side, and at Egypt Mountain the last of the mountainous country is passed.

In this 40-mile passage of the mountains safe landings on wheels or pontoons cannot be made except on pontoons on the lakes above mentioned. Safe landings can be made with skis on these lakes in winter and at several other places in Ptarmigan Pass on hard drifted snow.

From Egypt Mountain to McGrath the route crosses the flat open country partially timbered, partially swampy and open but dotted with many lakes in which safe ski landings can be made in the winter, and in which seaplane landings can be made during summer. No safe landings can be made in this area in land planes.

Landplane facilities.—The airport at Anchorage is adequate for day operations for all types of planes. Small territorial fields exist on an island in the Susitna River at Susitna Station and at McGrath which are adequate only for light planes flown by experienced pilots.

Seaplane facilities.—Seaplane facilities are available at Anchorage. Fair facilities exist in the Susitna River at Susitna Station. Good facilities exist in the Kuskokwim River at McGrath.

Ski facilities.—Facilities for ski operations are excellent for unlimited operations from the airport at Anchorage or from the ice on Lake Spenard and Susitna Station. At McGrath ski operations can be safely conducted from the ice on the river.

Weather conditions.—Good flying weather averages about 250 days a year over all portions of the airway except in crossing of the Alaska Range where cloud ceilings will be dangerously low when ample ceilings exist at either side of the airway. The average number of days in which the crossings can be made either over the range or through Ptarmigan Pass will average approximately 200 days a year.

That part of the route west of Ptarmigan Pass is subject to bad weather movements which move in an easterly direction from Bering Sea up the Kuskokwim Valley.

Bad weather conditions which exist on the east side of the mountains are usually caused by southerly winds on the frontal areas of low pressure areas moving east in the Gulf of Alaska, which carry a certain quantity of warm moisture-laden air up Cook Inlet which condenses on rising and meeting the colder air over the mainland mass, causes cloudy weather and moderate precipitation in the Susitna Valley. After the passage of the low-pressure area and the customary

wind shift to the northwest occasionally this cloudiness while disappearing from the Susitna Valley will remain low on the eastern slope of the mountains so that, while the rest of the route is clear, this local cloudiness will remain, closing Ptarmigan Pass and making it necessary to fly over the top.

During the fall months considerable fog is to be expected in Anchorage but mostly of a local nature; some fog occurs at McGrath.

Lake Spenard at Anchorage and the Kuskokwim River at McGrath as well as the lakes along the route freeze during the month of November and operations may be conducted on skis from about the middle of November to the latter part of April.

The ice breaks up in the rivers and snow disappears from the airport at Anchorage early in May and all lakes and other waterways are usually clear of ice by the middle of May, at which time operations can be transferred to pontoons or wheels.

During the freeze-up in the fall and the thaw in the spring the river and lake conditions are such as to prevent either ski or pontoon operations.

FAIRBANKS—CIRCLE—EAGLE—FORT YUKON

The first leg of this airway is a direct line between Fairbanks and Circle. The Fort Yukon leg follows down the Yukon River and the Eagle leg follows up the Yukon River.

Terrain.—From within 5 miles of Fairbanks to within 2 miles of Circle the route crosses a mountainous area of moderate elevation, the highest peak being about 4,800 feet.

No natural landing facilities are available for seaplanes between Fairbanks and Circle. Ski landings can be made with reasonable safety on the grassy creek bottoms after a foot or more of snow has fallen. Facilities for landplanes are almost entirely lacking, the only safe landings being on the territorial field at Circle Hot Springs.

Between Circle and Fort Yukon the route follows directly along the Yukon River in which reasonably safe seaplane landings can be made at any point and on which safe ski landings can be made during the winter. Reasonably safe landings with landplanes can be made on frequent river bars during low water.

Between Circle and Eagle the first 43 miles of the route is over low mountainous country to the east of the Yukon River and the remainder of the route over mountainous country to the west of the river.

No safe landings are available for landplanes along the direct route, although if a course is held slightly off the direct route to within gliding distance of the river, emergency landings can be made on the river bars. Reasonably safe landings on pontoons in summer and on skis in winter can be made if the river is followed.

Landplane facilities.—The territorial field at Circle Hot Springs is adequate for operations of landplanes of moderate size flown by experienced pilots. Small territorial fields exist at Fort Yukon and Circle but are unsatisfactory, the river bars are used for landplanes during summer operations. The small territorial field at Eagle has high bluffs at one end so that approaches from one direction only can be made and operations are safe only for small landplanes flown by experienced pilots under favorable wind conditions.

Seaplane facilities.—Fair facilities exist in the Yukon River at Circle for seaplanes of moderate size flown by experienced pilots. Good natural facilities are available at Fort Yukon. Fair facilities for moderate size seaplanes are available at Eagle.

Ski facilities.—Facilities for operation on skis are fair from the ice in the Yukon River at Circle and Eagle, and are good from the ice on Yukon River at Fort Yukon.

Weather conditions.—Good flying weather averages about 275 days a year at Fairbanks, Circle, and Eagle and about 300 days a year at Fort Yukon.

Bad weather conditions move from west to east along the route with but little variation in weather conditions anywhere along the route except that when solid overcast occurs over this portion of the interior, broken overcasts will often prevail at Fort Yukon and the immediate vicinity. Precipitation including snowfall is light throughout the entire area.

Rivers freeze during the month of October and by November 1 there is usually sufficient snow on the Fairbanks Field and ice is sufficiently thick at Circle, Fort Yukon, and Eagle so that operations may be transferred to skis early in November and continued on skis until the latter part of April.

The ice breaks up in the rivers and the snow disappears from the Fairbanks Field in the early part of May at which time operations may be transferred to wheels.

In this whole area traversed by this route there exists the warmest temperatures in the entire territory during the summer, temperatures having been recorded as high as 100° and inversely this area has the coldest winter temperatures, with records as low as 70° below zero.

FAIRBANKS—LIVENGOOD

This short route crosses low mountainous country between Fairbanks and Livengood. No facilities are available for landplane or seaplane operations on this route. Moderately safe ski landings can be made in several of the small valleys crossed when the open mossy ground is snow covered and frozen during the winter. The field at Livengood is small and unsafe for operations, except with light or moderate planes lightly loaded and flown by experienced pilots familiar with the field.

Weather conditions are similar to those encountered on the Fairbanks–Circle–Fort Yukon–Eagle Airway.

FAIRBANKS—ANCHORAGE

This route generally follows the Alaskan Railroad between these two towns. The lower portion of the route lies over the valley of the Susitna and crosses the Alaska Range at Broad Pass, and north of the Alaska Range crosses the flat open valley of the Tanana.

Small territorial fields exist at Curry, Broad Pass, and Healy, but their present size and condition are unsafe even for emergency landings. No other facilities for landplanes exist on this route. Limited facilities for emergency seaplane landings exist in the lakes located in the Susitna and Tanana Valleys, while fair emergency ski landings are available over the entire route during the winter after considerable snow has fallen.

General low ceiling conditions will close Broad Pass, and occasionally in that pass in winter, during high winds, severe ground blizzards occur.

TANANA—WISEMAN

This route crosses low mountainous country from Tanana to Allakaket and thence to Wiseman via Bettles, follows the valley of the Koyukuk River with mountainous country on both sides of the valley.

Fair to poor fields exist at Tanana and Wiseman, while moderately safe landings on wheels can be made on river bars at Allakaket and Bettles.

Good seaplane facilities are available at Tanana but are dangerous at Alatna and Bettles and are entirely lacking at Wiseman. Fair to good facilities for ski landings are available along this route during winter.

During the winter solstice virtually no daylight exists at Wiseman, and during the latter half of December and the first half of January, flights to Wiseman must be made during the full moon.

ANCHORAGE—BRISTOL BAY POINTS

Southwest of Anchorage this route crosses and follows Cook Inlet, crossing the southern extremity of the Alaska Range over a low pass north of the Iliamna Volcano, thence traverses the eastern shore of Lake Clark and the western shore of Iliamna Lake to the shores of the upper portion of that bay to Koggiung, Egigik, Dillingham, Naknek, Ugashik, and Kanakanak.

The following high peaks afford particularly good landmarks:

Susitna Mountain, 4,401 feet high, lies on the west side of Susitna River, 13 miles above the head of Cook Inlet. A high ridge extends off from it in a westerly direction.

Double Peak, 7,088 feet high, lies 15 miles northward of Redoubt Volcano, and has two knobs on top.

Redoubt Volcano, 10,198 feet high, is an important mark, lying 12 miles westward from the shore of Cook Inlet. There is a notch on its southeast slope just below the summit.

Iliamna Volcano, 10,017 feet high, lies 14 miles westward from the shores of Cook Inlet. Steam generally issues from fissures just below the summit and from one of the lower peaks on its southeast slope.

Except at Anchorage, no facilities for landplanes exist.

Good natural seaplane facilities exist over virtually the entire route, and reasonably safe ski operations can be conducted over the entire route during winter.

Virtually this entire route is subject to a certain amount of the ocean influence, and weather conditions are generally poorer than on any other route flown in the territory.

NOME—KOTZEBUE

This route crosses the mountainous country of the Seward Peninsula to Deering on Kotzebue Sound, thence southeasterly to Candle and north along the shores of Kotzebue Sound to Kotzebue.

Fair fields exist at Nome, Deering, Candle, and Kotzebue. Seaplane facilities at all these points are poor. Reasonably safe ski landing facilities are available along the route during the winter, except that ski landing facilities are dangerous in the mountains of the Seward Peninsula.

Weather conditions along this route particularly during the winter, are only fair as the entire route is subject to the influence of the bad weather of the Bering Sea and Bering Straits.

SEWARD—ANCHORAGE

This route follows the Alaska Railroad for several miles and then cuts across the high mountains of the Kenai Peninsula, thence over Turnagain Arm to Anchorage.

No facilities are available for emergency landings on wheels along the route. Seaplane facilities are available at Seward and Anchorage, and several lakes exist along the route in which emergency landing can be made.

Operations between these two points can be conducted on skis when sufficient snow exists at Seward, although the snow conditions at Seward are subject to great variation on account of the coast influence. On account of this variation in snow conditions, operations between Seward and Anchorage during the winter are problematical.

COPPER RIVER VALLEY ROUTES

Several short routes exist in the Copper River Valley region as follows:

Valdez–Copper Center.
Cordova–Chitina.
Chitina–Copper Center.
Chitina–Kennicott.

Between Valdez or Cordova, and the Copper River country the Chugack Mountains (Coast Range) must be flown over the high summits or through dangerous passes in which violent winds often occur. South of these mountains the typical bad weather condition of the coast are encountered, while north of the mountains in the Copper River Valley proper much better conditions exist.

Fairly satisfactory fields exist at Valdez and Cordova, and fair fields exist at Copper Center, Chitina, and Kennicott. Satisfactory seaplane facilities are lacking, except at Valdez and Cordova. Fair ski facilities exist throughout the area during the winter except that at Valdez and Cordova facilities are variable on account of temperature variations, resulting from the coastal influence.

FAIRBANKS—SOUTHEASTERN ALASKA

Two routes exist between Fairbanks and Southeastern Alaska. The first of these follows the Fairbanks—Circle—Eagle route to Eagle and thence up the Yukon River to Whitehorse and along the line of the White Pass and Yukon Railroad to Skagway.

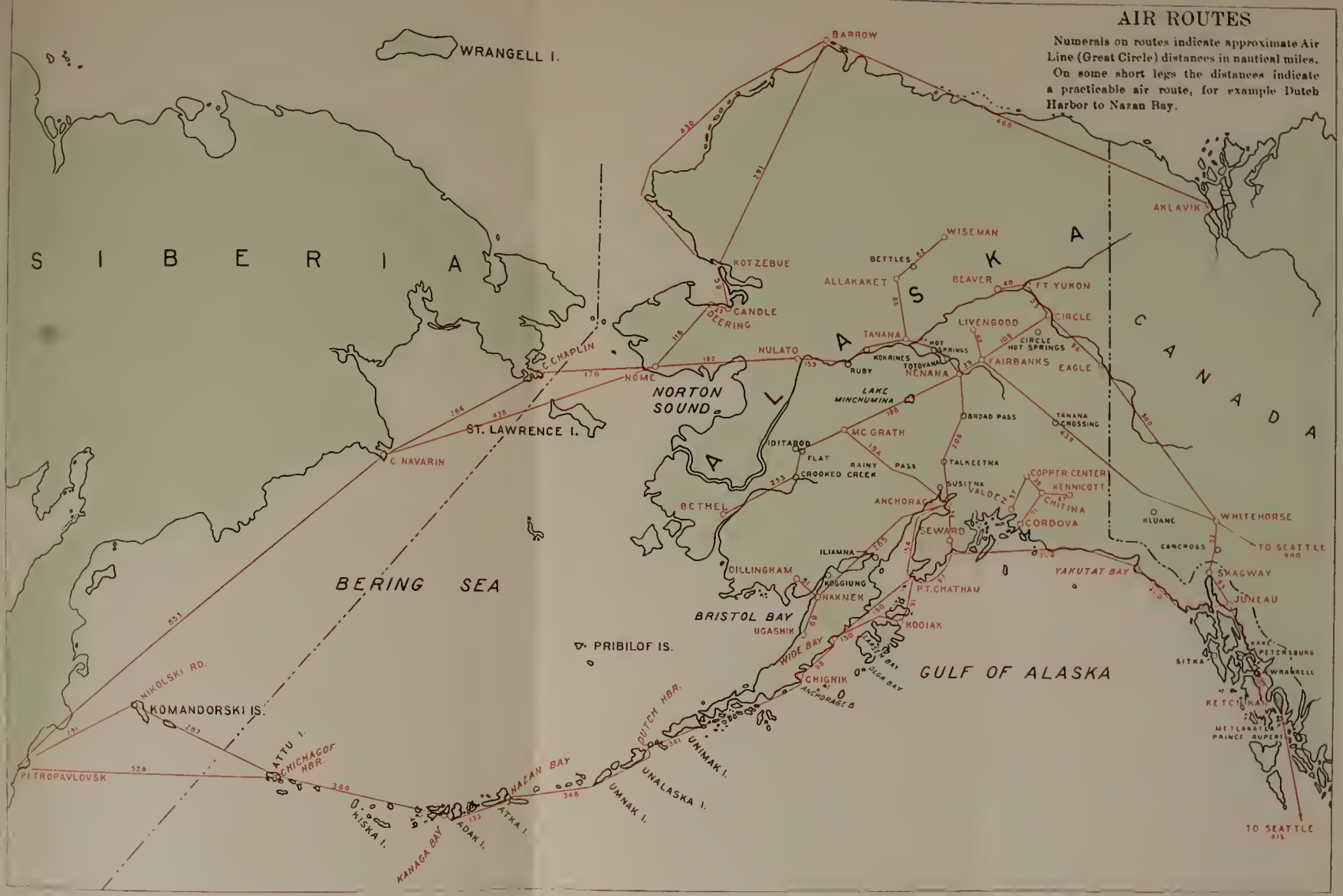
The second route goes southeast through Fairbanks, up the valley of the Tanana to its headwaters, thence over a low divide to the boundary of the Yukon Territory, thence follows the open valleys to Kluane Lake. From Kluane Lake the route can be flown to Whitehorse and thence to Skagway or from Kluane Lake up the valley of a small river to a low divide and thence down the valley of another small river to Klukwan where highway connections are available to Haines.

Landplane facilities, except at Fairbanks, are far from satisfactory on either route. Seaplane facilities in summer and ski facilities in winter are fair along the Yukon route and are good along the Tanana route, except that ski facilities on the field at Skagway are unreliable on account of comparatively mild and variable winter weather.

Generally weather conditions along the Tanana route will be found to be better than along the Yukon route.

Natural operating facilities are likewise more suitable along the Tanana route.


AIR ROUTES
Numerals on routes indicate approximate Air Line (Great Circle) distances in nautical miles.
On some short legs the distances indicate a practicable air route, for example Dutch Harbor to Nazan Bay.
466
AKLAVIK
S
A
K
A
C
A
N
A
D
A
40
FT. YUKON
53
CIRCLE
109
CIRCLE HOT SPRINGS
96
FAIRBANKS
EAGLE
300
TANANA CROSSING
439
COPPER CENTER
36
KENNICOTT
57
47
CHITINA
71
CORDOVA
KLUANE
WHITEHORSE
82
CARCROSS
TO SEATTLE
980
304
YAKUTAT BAY
SKAGWAY
85
200
JUNEAU
KAKE
PETERSBURG
SITKA
WRANGELL
OF ALASKA
200
KETCHIKAN
METLAKATLA
PRINCE RUPERT
291
PETROPAVLOV
TO SEATTLE
615


AIR ROUTES
Numerals on routes indicate approximate Air Line (Great Circle) distances in nautical miles. On some short legs the distances indicate a practicable air route, for example Dutch Harbor to Nazan Bay.
WRANGELL I.
BARROW
SIBERIA
ALASKA
CANADA
WISEMAN
BETTLES
ALLAKAKET
BEAVER
FT YUKON
KOTZEBUE
CANDLE
DEERING
LIVENGOOD
CIRCLE
TANANA
HOT SPRINGS
CIRCLE HOT SPRINGS
C. CHAPLIN
NULATO
KOKRINES
RUBY
TOTOVANA
NENANA
FAIRBANKS
EAGLE
NOME
NORTON SOUND
LAKE MINCHUMINA
ST. LAWRENCE I.
C. NAVARIN
MC GRATH
IDITAROD
FLAT
RAINY PASS
CROOKED CREEK
BIRDAD PASS
TANANA CROSSING
TALKEETNA
COPPER CENTER
KENNICOTT
SUSITNA
VALDEZ
CHITINA
BETHEL
ANCHORAGE
SEWARD
CORDOVA
KLUANE
WHITEHORSE
TO SEATTLE
ILIAMNA
CANCROSS
BERING SEA
DILLINGHAM
KOGGIUNG
NAKNEK
PT. CHATHAM
YAKUTAT BAY
SKAGWAY
BRISTOL BAY
UGASHIK
KODIAK
JUNEAU
PRIBILOF IS.
WIDE BAY
CHIGNIK
ANCHORAGE B
OLGA BAY
GULF OF ALASKA
SITKA
PETERSBURG
WRANGELL
NIKOLSKI RD.
KOMANDORSKI IS.
KETCHIKAN
METLAKATLA
PRINCE RUPERT
ATTU I.
CHICHAGOF HBR.
PETROPAVLOVSK
NAZAN BAY
DUTCH HBR.
UNIMAK I.
UNALASKA I.
UMNAK I.
KISKA I.
ATKA I.
ADAK I.
KANAGA BAY
TO SEATTLE

PART II

DETAILED INFORMATION ON SEAPLANE ANCHORAGES AND LANDING FIELDS

SYMBOLS

Seaplane Anchorages

Class I. Seaplane base with ramp, beach and handling facilities---

Class II. Anchorage with refueling and ordinary harbor facilities--

Class III. Protected anchorage with limited facilities----------

Landmark light beacon----------

Airport light beacon----------

Night lighting facilities---------- LF

Radio station with call letters---------- RS(WZA)

Prominent transmission line----------

Prohibited area----------

Obstruction (Numerals indicate height above ground in feet)---------- 500

Prominent Peak (Numerals indicate height above ground in feet)---3,000

Railroad----------

Cities underlined have name painted on prominent roof---------- KODIAK

Lighthouse----------

Main highway----------

Secondary highway----------


166° 00'
Nautical Miles
0 1 2 3 4 5
2500
North Head
Open Bight
AKUTAN
BAY
1600
Ridge Pt.
Hot Springs
Bay
Sandy Cove
AKUN STRAIT
54° 20'
Lava Pt.
1900
OBSCURED
1600
Fl.
AKUTAN
Akutan Hbr.
Akutan Pk.
4100
Flat Top Pk.
3170
Red Bluff
1500
Green
Bight
AKUTAN I.
Flat Bight
1400
Vulcan Cove
Triplet
C. Morgan
Sarana Bay
1600
Battery Pt.


165° 48'
Viliage
54° 08'
AKUTAN HARBOR
Nautical Mile
0 ½ 1

AKUTAN HARBOR

AKUTAN ISLAND—KREITZEN GROUP

SEAPLANE ANCHORAGE

(Lat. 54°08′ N., Long. 165°46′ W.)

DESCRIPTION

Location: Akutan Harbor, on the north side of Akutan Island near its eastern end.

LANDING AND TAKE-OFF AREA

Location: Akutan Harbor. **Area:** N./S., ½ to 1¾ miles; E./W., 3¾ miles. **Obstructions:** No known dangers over 300 yards from shore; keep clear of kelp.

FACILITIES

Native village on north side of harbor. There is a post office and the mail steamer from Seward makes regular calls. A whaling station with ramp which is used for pulling whales out of water. The wharf is equipped with a crane. **Beach:** No beach exists near the whaling station, but a narrow shingled beach with about 40° angle slope in the western part of the harbor might be used.

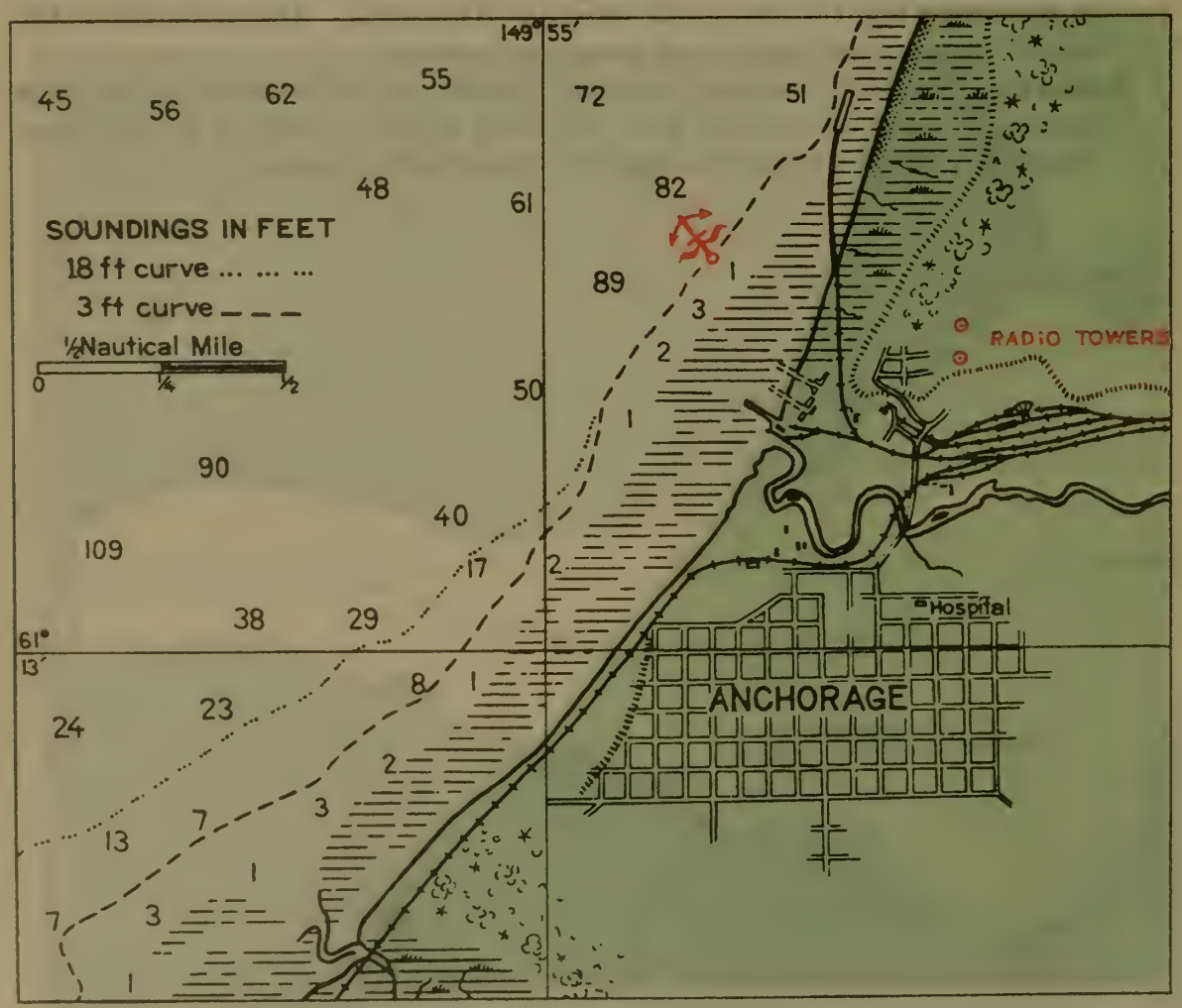
GENERAL INFORMATION

Landmarks: Akutan Peak, 4,100 feet high, near the middle of the island is the highest point.

Tender anchorage: Anchorage off the north shore abreast an Aleut village about 1⅝ miles westward of the north point at the entrance and about 300 yards from the shore in about 22 fathoms. A vessel may also anchor in the broad bight in the south shore in 15 fathoms. Ample depths at the wharf for coasting freight and passenger vessels.

Remarks: Reported to be an excellent harbor, is not subject to the same adverse weather conditions and williwaws as other harbors in this area. Floating patches of slush ice may be found in the harbor.


Nautical Miles
1 0 1 2 3
150° 00'
320
340
Otter L.
450
400
KNIK ARM
Pt. Mackenzie
RS(WXE)
ANCHORAGE AIRPORT
C O O K
Pt. Woronzof
ANCHORAGE
61° 11'
Fl.
North Pt.
Lake Spenard
FIRE I.
350
Lt.Obsc.
Lt.Obsc.
Pt. Campbell
250
Fl.
West Pt.
I N L E T


149° 55'
45
56
62
55
48
61
72
51
82
89
SOUNDINGS IN FEET
18 ft curve ... ...
3 ft curve _ _ _
½ Nautical Mile
0 ¼ ½
RADIO TOWERS
50
90
40
109
17
38
29
Hospital
61° 13'
ANCHORAGE
24
23
8
13
7
3
1

ANCHORAGE

COOK INLET

SEAPLANE ANCHORAGE

(Lat. 61°14′ N., Long. 149°54′ W.)

DESCRIPTION

Location: Knik Harbor, 1 mile north of Anchorage. **Depth:** 3 to 30 feet. **Tidal range:** 26.7 feet. **Character of bottom:** Hard mud. **Currents:** About 5 knots. **Shelter:** Fair. **Marking:** Letters "N.C. Co" on roof in town.

LANDING AND TAKE-OFF AREA

Location: Knik Arm and Cook Inlet. **Area:** Unlimited. **Shelter:** Fair. **Obstructions:** Shoals close to shore.

FACILITIES

Specification fuel and oil; floating ramp—hauled out during winter months; good machine shop. Derrick available for changing landing gear. **Communications:** Army radio station, call letters WXE; Alaska Railroad radio station, call letters KWL. Telegraph with Seward and interior cities. Telephone at cannery adjacent to anchorage. Headquarters of the Alaska Railroad. Small coasting vessels occasionally call, but the larger freight and passenger vessels do not call regularly since the railroad connection with Seward.

GENERAL INFORMATION

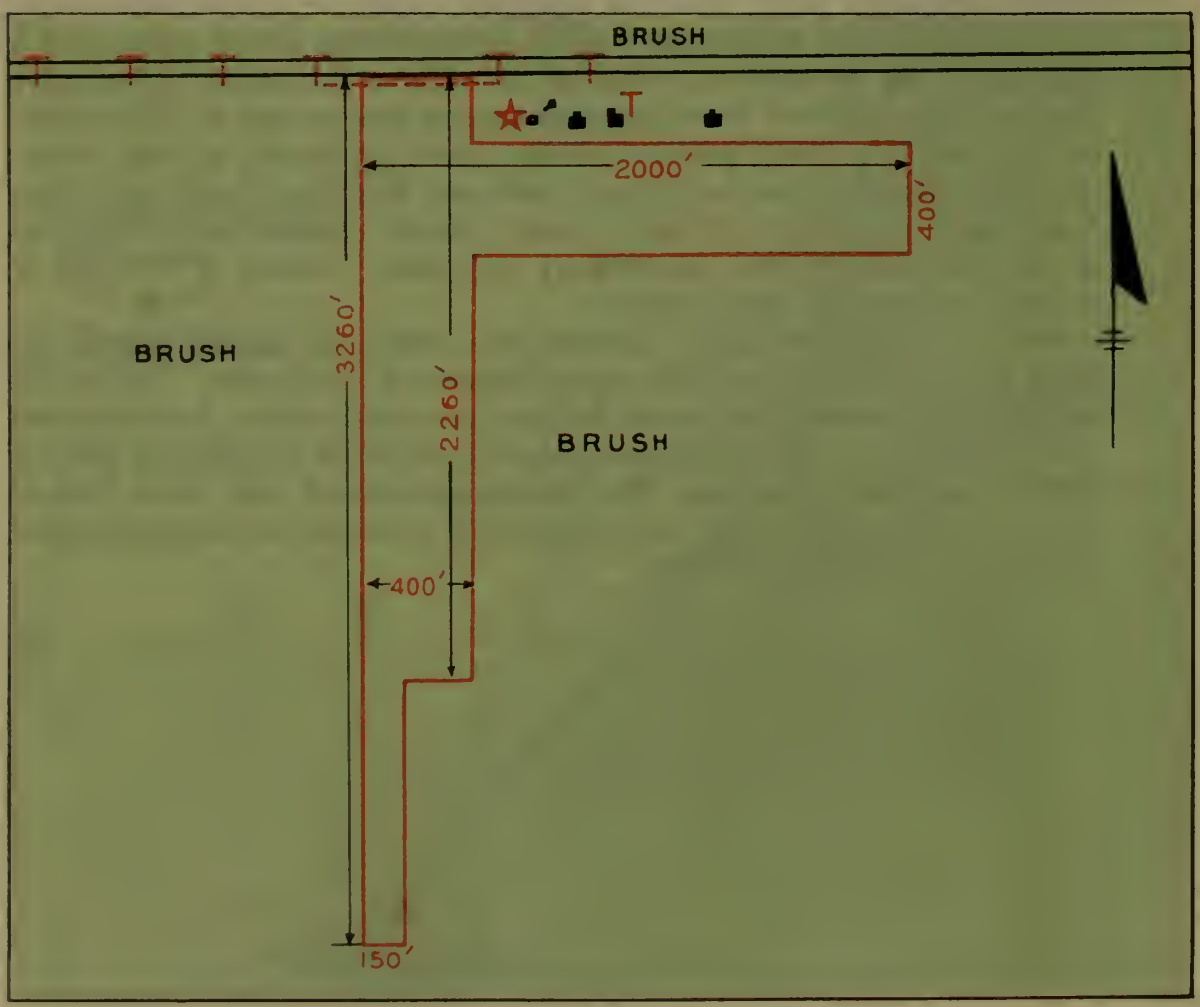
Meteorological table: See page 29.

Landmarks: Radio towers. White revolving beacon, 6 r.p.m. on a 52-foot framework tower, 1 mile east of Anchorage.

Tender anchorage: Knik Arm has sufficient depth for deep-draft vessels, with the exception of the bar 2 miles north of Fire Island which had a least depth on the crest of 17 feet at the time of the survey. Extensive changes have occurred in the hydrography of the bar and in the absence of aids vessels without local knowledge should cross only at high water. Anchorage may be had in the bight between Woodrow Creek and Cairn Point; good depths extend fairly close to shore. Vessels anchor close to avoid strongest currents which have estimated velocity of 4 knots or more at strength in middle of arm.

Remarks: In rough weather moderate-size seaplanes lightly loaded use Lake Spenard, located about 4 miles southwest of Anchorage. This lake is about ¾ mile long by ½ mile wide and has four small ramps. Lake Spenard is used primarily for storage and securing seaplanes while Cook Inlet is used for general operations. The beacon is operated daily from 1530 to 2130 (115th meridian time) after which it is operated on request or when a plane is heard in the vicinity.


Nautical Miles
1 0 1 2 3
150° 00′
320
340
Otter L.
450
400
ARM
KNIK
Pt. Mackenzie
RS(WX)
ANCHORAGE AIRPORT
C O O K
Pt. Woronzof
ANCHORAGE
61° 11′
Fl.
North Pt.
Lake Spenard
Pt. Campbell
250
FIRE I.
350
Fl.
West Pt.
I N L E T


BRUSH
2000′
400′
3260′
2260′
BRUSH
BRUSH
400′
150′

ANCHORAGE

COOK INLET

MERRILL FIELD

(Lat. 61°13′ N., Long. 149°51′ W.)

DESCRIPTION

Location: Municipal landing field, 1 mile east of Anchorage. **Altitude:** 110 feet. **Dimensions:** Landing strips, N./S., 2,260 by 400 feet; E./W., 2,000 by 400 feet. **Surface:** Level soil over gravel. **Drainage:** Natural, good. **Marking:** White corner markers; letters "P.I.A." on hangar roof; wind cones. **Lighting:** White revolving beacon, 6 r.p.m.; operated daily from 1530 to 2130 (115th meridian) after which operated on request or when plane is heard. **Obstructions:** 52-foot beacon tower at northeast intersection of landing strips; road adjacent to north end of field.

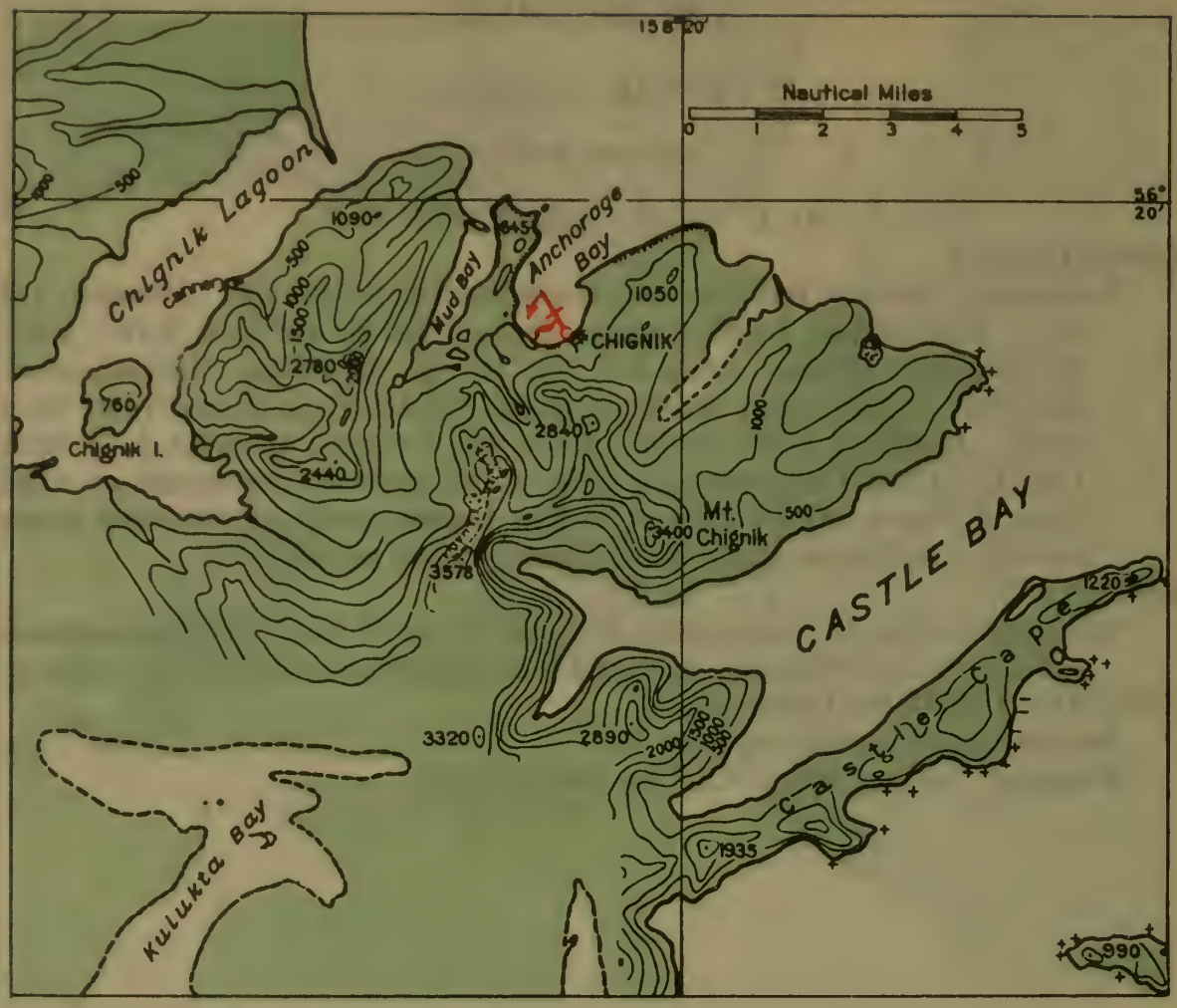
FACILITIES

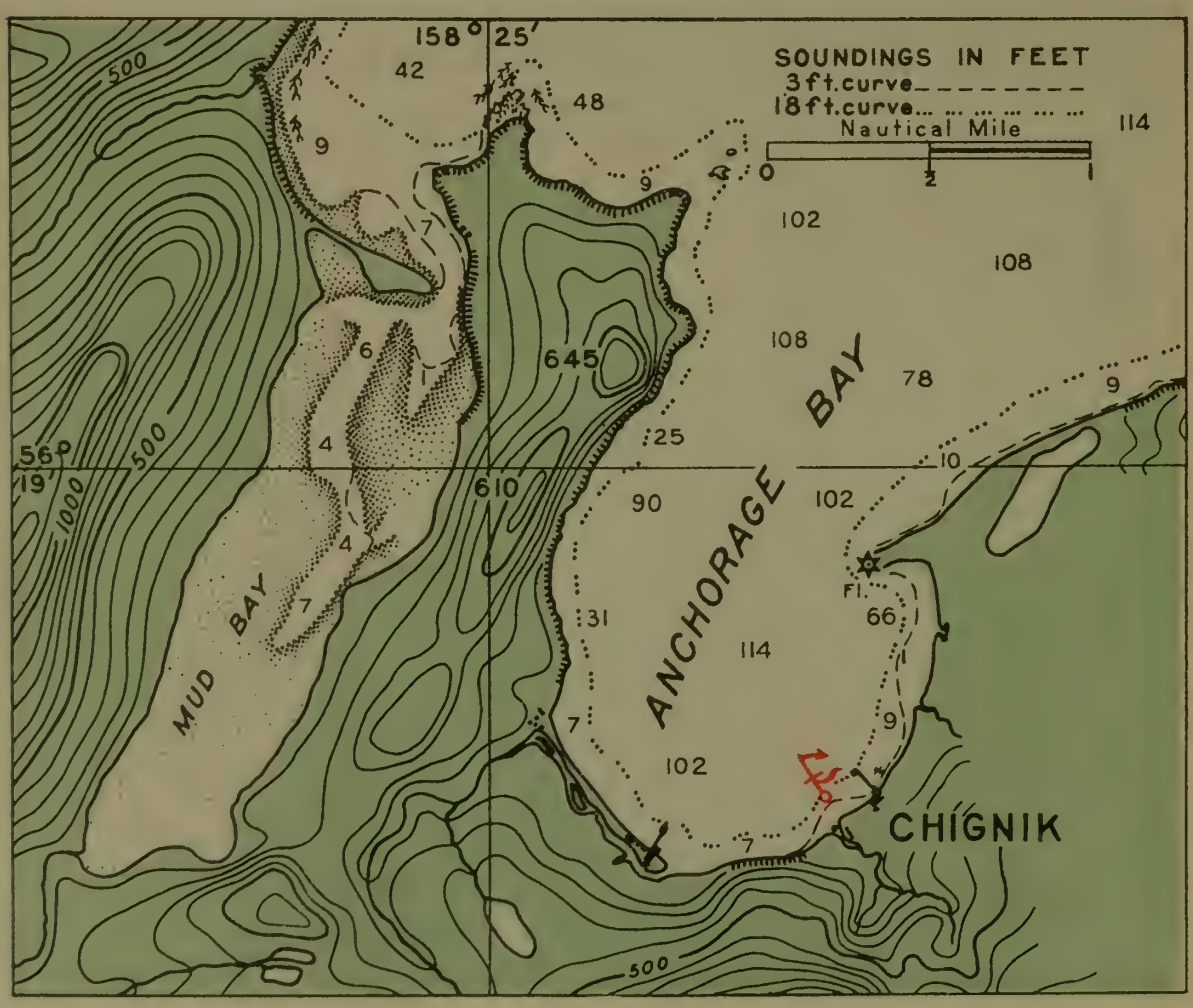
Specification fuel and oil; repairs; hangars, 50 by 60 feet. **Communications:** Telephone and telegraph; radio station at Anchorage; daily weather reports.

GENERAL INFORMATION

Meteorological table: See page 29.

Remarks: Letters "N.C. Co." on roof in town.


158°20'
Nautical Miles
0 1 2 3 4 5
56°20'
Chignik Lagoon
Mud Bay
Anchorage Bay
CHIGNIK
Chignik I.
760
2780
2440
2840
1050
1090
1000
500
Mt. Chignik
3400
3578
CASTLE BAY
Castle Cape
1220
3320
2890
2000
1935
Kulukta Bay
990


158°25'
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Mile
0 2 1
42
48
114
102
108
108
78
645
610
90
102
66
114
31
25
10
9
7
6
4
500
1000
56°19'
MUD BAY
ANCHORAGE BAY
Fl.
CHIGNIK

ANCHORAGE BAY

CHIGNIK BAY—ALASKA PENINSULA

SEAPLANE ANCHORAGE

(Lat. 56°18′ N., Long. 158°23′ W.)

DESCRIPTION

Location: Anchorage Bay adjacent to Chignik village. **Depth:** 6 to 60 feet. **Tidal range:** 6 to 8 feet. **Character of bottom:** Soft mud and sand. **Currents:** Negligible. **Shelter:** Good, except during the heavy winds and williwaws that are prevalent here.

LANDING AND TAKE-OFF AREA

Location: Anchorage and Chignik Bays. **Area:** Anchorage Bay, NE./SW., 1.5 miles, E./W., 1 mile; Chignik Bay, unlimited. **Shelter:** Anchorage Bay, good; Chignik Bay, poor. **Obstructions:** High abrupt hills around three sides of Anchorage Bay.

FACILITIES

There are two canneries with a general store. Good wharfs, but no means of hoisting out. Small boats available. **Beach,** fairly good, located in the northeast part of the bay suitable for hauling out, not suitable for amphibians; shoal water, 2 feet or less at low tide, runs out about 50 yards. At high tide it may be approached safely. The other beaches are rough and rocky. **Communications:** Two radio stations operated by cannery companies, call letters KJB and KNP. Monthly mail boat from Seward makes regular calls.

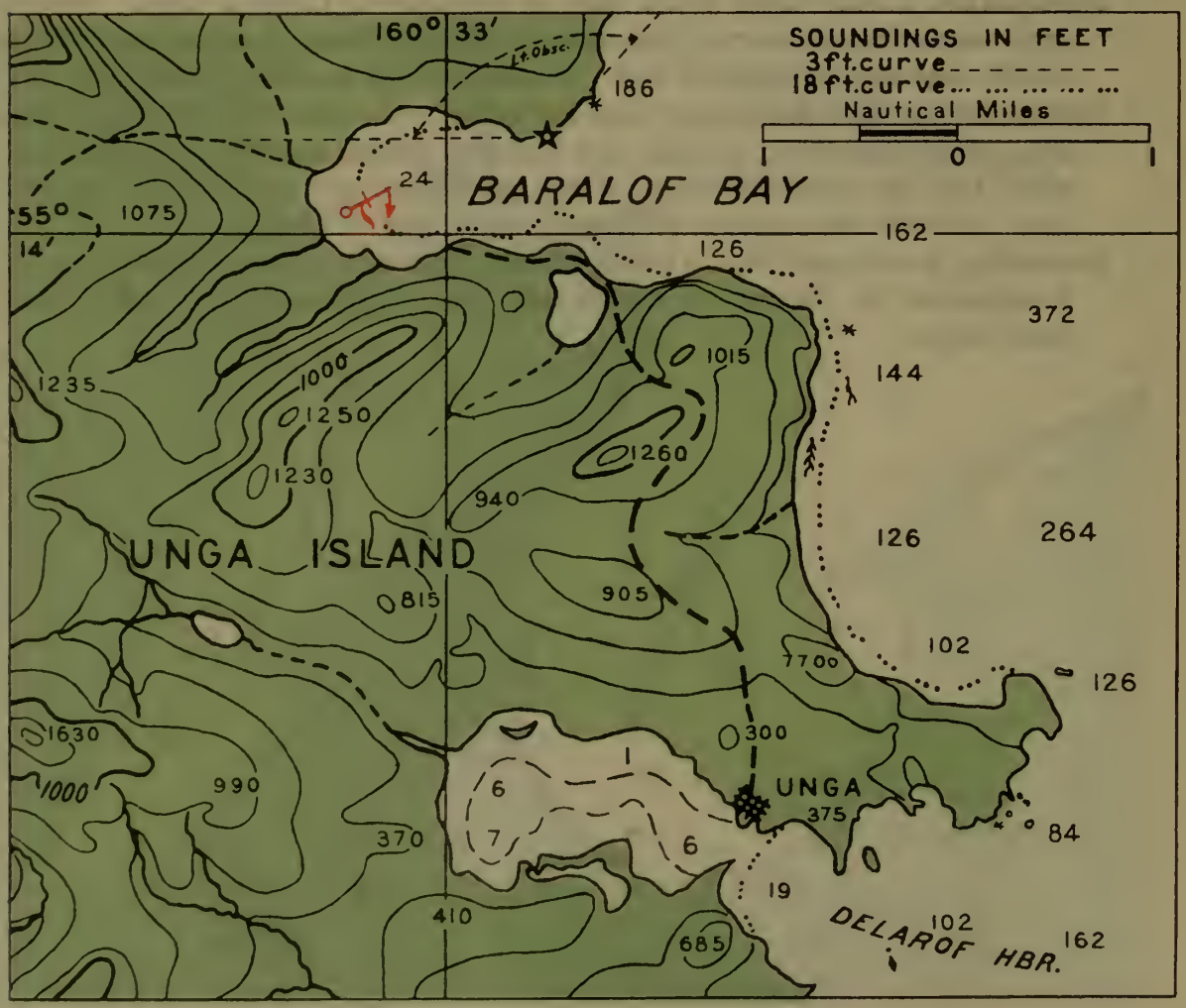
GENERAL INFORMATION

Landmarks: Castle Cape, south side of entrance to Chignik Bay. Conical peak east of the center of Nakchamik Island a large circular island lying in mid-entrance to Chignik Bay. Canneries and docks in Anchorage Bay.

Tender anchorage: Anchorage may be had at convenience in the bay, dragging may be expected in most any location during heavy winds and williwaws that are prevalent here. Care should be used in anchoring at high tide, for flats make out for a distance, and drop off sharply.

Remarks: Anchorage Bay in common with Castle Bay and Chignik Lagoon is subjected to violent williwaws and the flying conditions are usually unfavorable.


160° 30'
ZACHARY BAY
SAND PT.
HUMBOLDT HBR.
POPOF I.
POPOF STRAIT
55° 17'
UNGA ISLAND
Fl.
BARALOF BAY
ACHEREDIN BAY
UNGA
DELAROF HBR.
Nautical Miles
1 0 1 2 3 4


160° 33'
SOUNDINGS IN FEET
3ft.curve
18ft.curve
Nautical Miles
1 0 1
Ft.Obsc.
BARALOF BAY
55° 14'
UNGA ISLAND
UNGA
DELAROF HBR.

BARALOF BAY

UNGA ISLAND—SHUMAGIN ISLANDS

SEAPLANE ANCHORAGE

(Lat. 55°14′ N., Long. 160°33′ W.)

DESCRIPTION

Location: Baralof Bay (Squaw Harbor) east coast of Unga Island. **Depth:** 6 to 90 feet. **Tidal range:** 5 feet. **Character of bottom:** Sticky mud, fair holding ground. **Currents:** Negligible. **Shelter:** Good, except in heavy easterly weather.

LANDING AND TAKE-OFF AREA

Location: Baralof Bay. **Area:** N./S., ½ mile; E./W., 1½ miles. **Shelter:** Good, except in heavy easterly weather. **Obstructions:** Shoals and rocks close to shore; high hills surround bay.

FACILITIES

Small amount of low-test gasoline can be obtained at the cannery on the north side of bay. There is a general store and a good wharf, but no means of hoisting out. **Beach** suitable for hauling out at southwest part of bay; not suitable for amphibians. **Communications:** Army radio station, call letters WZF, is operated at Baralof Bay. Vessels of the Pacific American Fisheries make regular calls. Unga may be reached from Baralof Bay by a trail, about 4 miles.

GENERAL INFORMATION

Meteorological conditions:

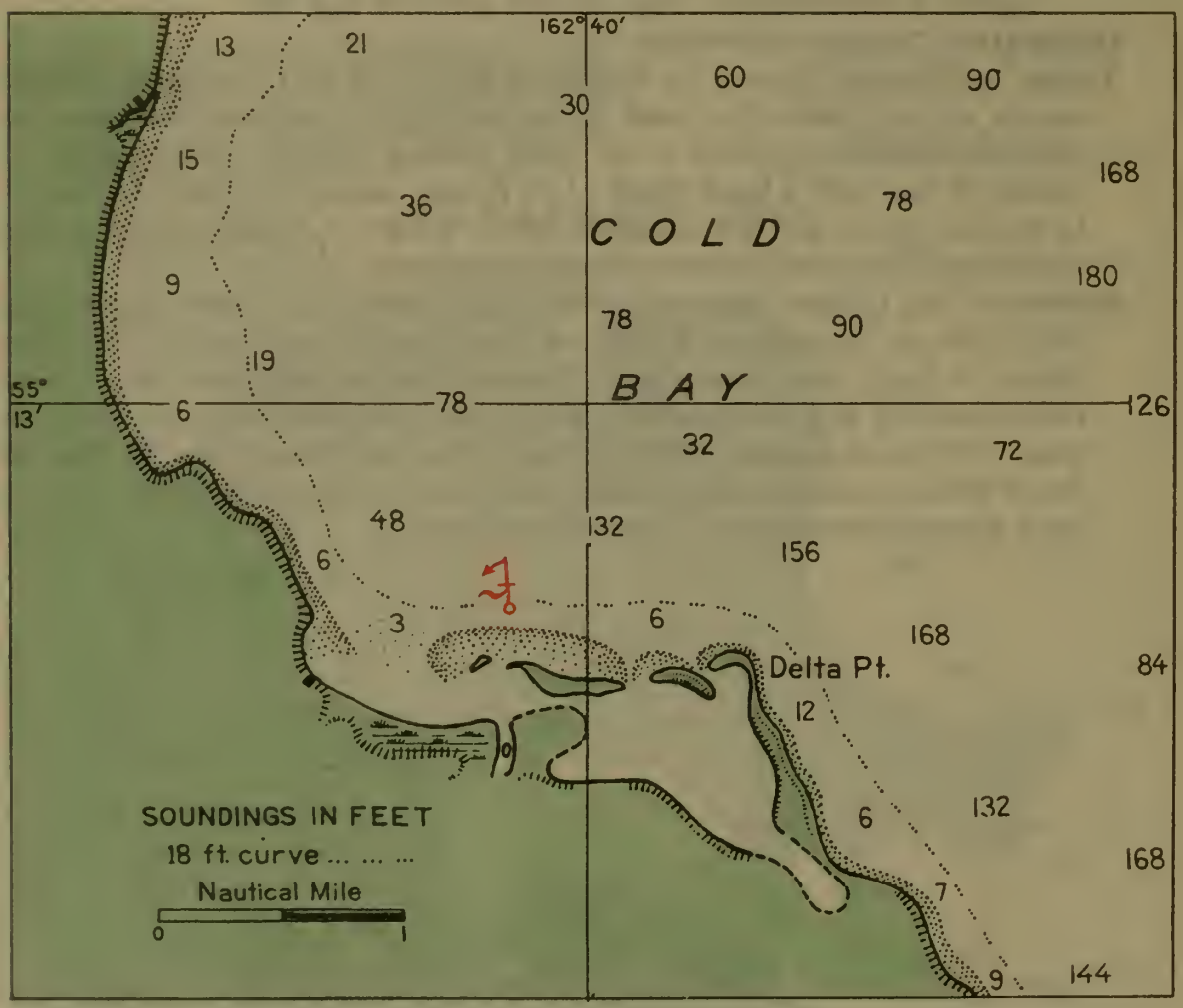
Prevailing winds: Southwest in summer; south in winter. *Heaviest gales:* Southeasterly. *Fog:* In late summer and fall.

Landmarks: Cannery and village.

Tender anchorage: Anchor in middle of bay in 16 to 18 fathoms. Small vessels anchor nearer the head of the harbor, in not less than about 6 fathoms. Bottom appears to be good holding ground. Sandy shoal in middle of bay with a least depth of 24 feet is used for a winter anchorage by fishing vessels and is considered safe. Wharf at cannery has frontage of 162 feet and depth of about 28 feet alongside.

Remarks: The highest mountains on Unga Island, just south of Zachary Bay, have an elevation of 2,270 feet. In general, the shore line of Unga Island is rocky and precipitous. Baralof Bay is small and exposed to strong easterly and southeasterly winds, but otherwise offers good protection. The most serious defect at Baralof is the limited take-off area, as Popof Strait develops considerable chop even in moderate winds. There are a few settlers along the Unga Island shore.


162°30'
Kinzarof Lagoon
Grant Pt
P E N
Delta Pt.
COLD
55°
10'
BAY
A L A S K A
2750
2760
2340
Lenard Hbr.
Kelp Pt.
Nautical Miles
0
5
1950
2290
2160
1860
Frosty Pt.
5820


162°40'
13
21
30
60
90
15
168
36
78
C O L D
9
180
78
90
19
55°
13'
BAY
6
78
126
32
72
48
132
156
6
3
6
168
Delta Pt.
84
12
SOUNDINGS IN FEET
18 ft. curve ... ...
Nautical Mile
0
1
6
132
168
7
9
144

COLD BAY

ALASKA PENINSULA

SEAPLANE ANCHORAGE

(Lat. 55°12′ N., Long. 162°41′ W.)

DESCRIPTION

Location: Cold Bay about 1.5 miles northwest of Delta Point. **Depth:** 3 to 60 feet. **Tidal range:** 5 to 8 feet. **Character of bottom:** Sticky mud. **Currents:** Negligible. **Shelter:** Poor. Some protection can be obtained by shifting anchorage about the bay according to the wind; in strong northwest winds the bay is unsafe for seaplanes.

LANDING AND TAKE-OFF AREA

Location: Cold Bay. **Area:** N./S., 15 miles; E./W., 2 to 7 miles. **Shelter:** Poor. **Obstructions:** Mountains with bold and rocky shores south of Lenard Harbor.

FACILITIES

Few cabins occupied by fur trappers during the winter. Beach suitable for hauling out adjacent to anchorage; not suitable for amphibians.

GENERAL INFORMATION

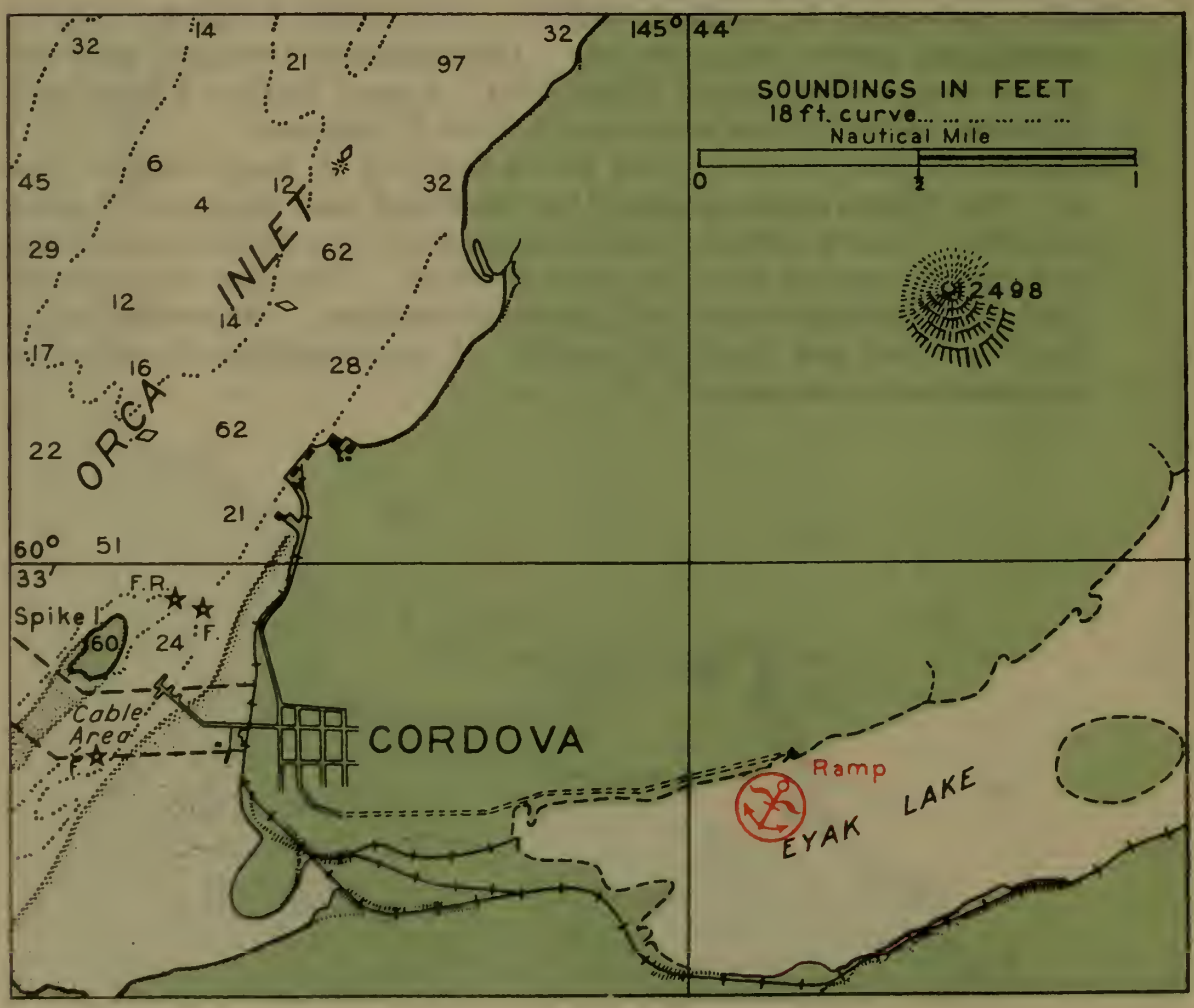
Meteorological conditions: Cold Bay is exposed to strong winds, especially those from the northward which sweep across the flats from Bering Sea and draw through the narrow entrance of the bay. When there is little wind elsewhere, a strong wind will be found blowing out of Cold Bay. Lenard Harbor is subject to violent williwaws.

Landmarks: Frosty Peak (5,820 feet) 10 miles southwest; Walrus Peak (2,927 feet) 15 miles southwest.

Tender anchorage: In northerly weather, comfortable anchorage may be selected any place in the upper bay. In southeasterly weather, good protection may be had behind Delta Point. Lenard Harbor, a small well-protected harbor affords anchorage in 16 to 22 fathoms.

Remarks: Northern shore of Cold Bay is bordered by many boulders close in. The western shore consists of low bluffs and sand beaches with many boulders. Lenard Harbor is not recommended for a seaplane anchorage, as it forms a natural draw for nearly all winds. Thinpoint Cove, west of Cold Bay, affords good shelter in northerly weather. The eastern part of the cove is foul and should be avoided. A local magnetic attraction has been reported in this area.


145° 35'
Scott Gl.
ORCA
2498
3229
3724
6260
Eyak L.
Sheridan Glacier
Sherman Glacier
CORDOVA
3141
4092
60° 29'
CORDOVA AIRPORT
ALAGANIK
PACIFIC
OCEAN
Fl.
Nautical Miles
5 0 5


145° 44'
SOUNDINGS IN FEET
18 ft. curve
Nautical Mile
0 ½ 1
2498
ORCA INLET
60° 51
33'
F.R.
Spike I.
F.
Cable Area
CORDOVA
Ramp
EYAK LAKE

CORDOVA

PRINCE WILLIAM SOUND

SEAPLANE ANCHORAGE

(Lat. 60°32′ N., Long. 145°43′ W.)

DESCRIPTION

Location: North shore of the western part of Eyak Lake about 1 mile east of Cordova. **Depth:** About 10 feet. **Tidal range:** None. **Character of bottom:** Gravel and silt. **Currents:** None. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: Eyak Lake. **Area:** N./S., ½ to 1 mile; E./W., 2.5 miles. **Shelter:** Good. **Obstructions:** Island in lake.

FACILITIES

Specification fuel and oil from drums and via small boats; minor repairs; hangar, 40 by 50 by 12½ feet; platform 100 by 100 feet with ramp 60 by 40 feet; marine railway; ordinary harbor facilities. **Beach** suitable for amphibians. **Communications:** Navy radio station, call letters, NPA; Army radio station, call letters, WTU; cannery radio station, call letters, KRU. Telephone along railroad; cable to Alaska ports and Seattle. Terminus of the Copper River & Northwestern Railway.

GENERAL INFORMATION

Meteorological table: See page 30.

Landmarks: Cordova. Eyak Lake.

Tender anchorage: Deepest channel north of North Island, then follows eastern shore with a least width of 350 yards and least depth of 5 fathoms. Good anchorage in channel westward of Spike Island in 8 to 10 fathoms. Ocean dock at Cordova has a face of 740 feet with a least depth of 19½ feet alongside. Cannery dock at Shepard Point has a face of 75 feet with a least depth of 35 feet alongside. Orca cannery wharf has a least depth of 23½ feet alongside.

Remarks: The lake is frozen over during the winter, making good landing for landplanes.


145° 35'
Scott Gl.
6260
3229
3724
Sheridan Glacier
Sherman Glacier
Exak L.
CORDOVA
3141
4092
60° 29'
CORDOVA AIRPORT
ALAGANIK
PACIFIC
OCEAN
Fl.
Nautical Miles
5 0 5


1250'
900'
250'
250'

CORDOVA

PRINCE WILLIAM SOUND

CORDOVA AIRPORT

(Lat. 60°26′N., Long. 145°21′W.)

DESCRIPTION

Location: Government field located on southern side of the Copper River & Northwestern Railway, about 14 miles southeast of Cordova, and 5 miles west-northwest of Alaganik. **Altitude:** 30 feet. **Dimensions:** Landing strips, N./S., 1,250 by 250 feet; E./W., 900 by 250 feet. **Surface:** Level gravel and sand. **Drainage:** Natural; north end of N./S., landing strip flooded at high water. **Marking:** White corner markers at N./S. runway; wind cone on pole. **Lighting:** None. **Obstructions:** Telephone line to north; low trees to east, south, and west; radio towers about 2 miles northwest.

FACILITIES

None. **Communications:** Telephone on pole at north end of field; transportation to city via automobile.

GENERAL INFORMATION

Meteorological table: See page 30.

Landmarks: Sheridan Glacier 2.5 miles north of field.

Remarks: Planes using this field should fly over the town and return transportation will be sent to field.

(77) ALASKA; CORDOVA; CORDOVA AIRPORT; INFORMATION.—

CORDOVA:

Position.—60°32′ N., 145°43′ W.

Name and location.—Cordova Airport, located on the north shore of the western part of Eyak Lake, about 1 mile east of Cordova, Alaska.

Altitude.—30 feet.

Description.—The landing field is nearly rectangular in shape, size 2,000 by 200 feet E./W. Surface, rock and gravel; good in all weather. Gradient, level. Drainage, natural.

Obstructions.—None.

Marking.—None.

Lighting.—None.

Facilities.—Specification fuel and oil from drums. Minor repairs. Hangar.

Communications.—Army radio station (WTU). Cable to Alaska ports and Seattle. Telephone.

Remarks.—The old landing field formerly in operation on the southern side of the C. R. & N. W. Ry., about 14 miles southeast of Cordova, has been discontinued.

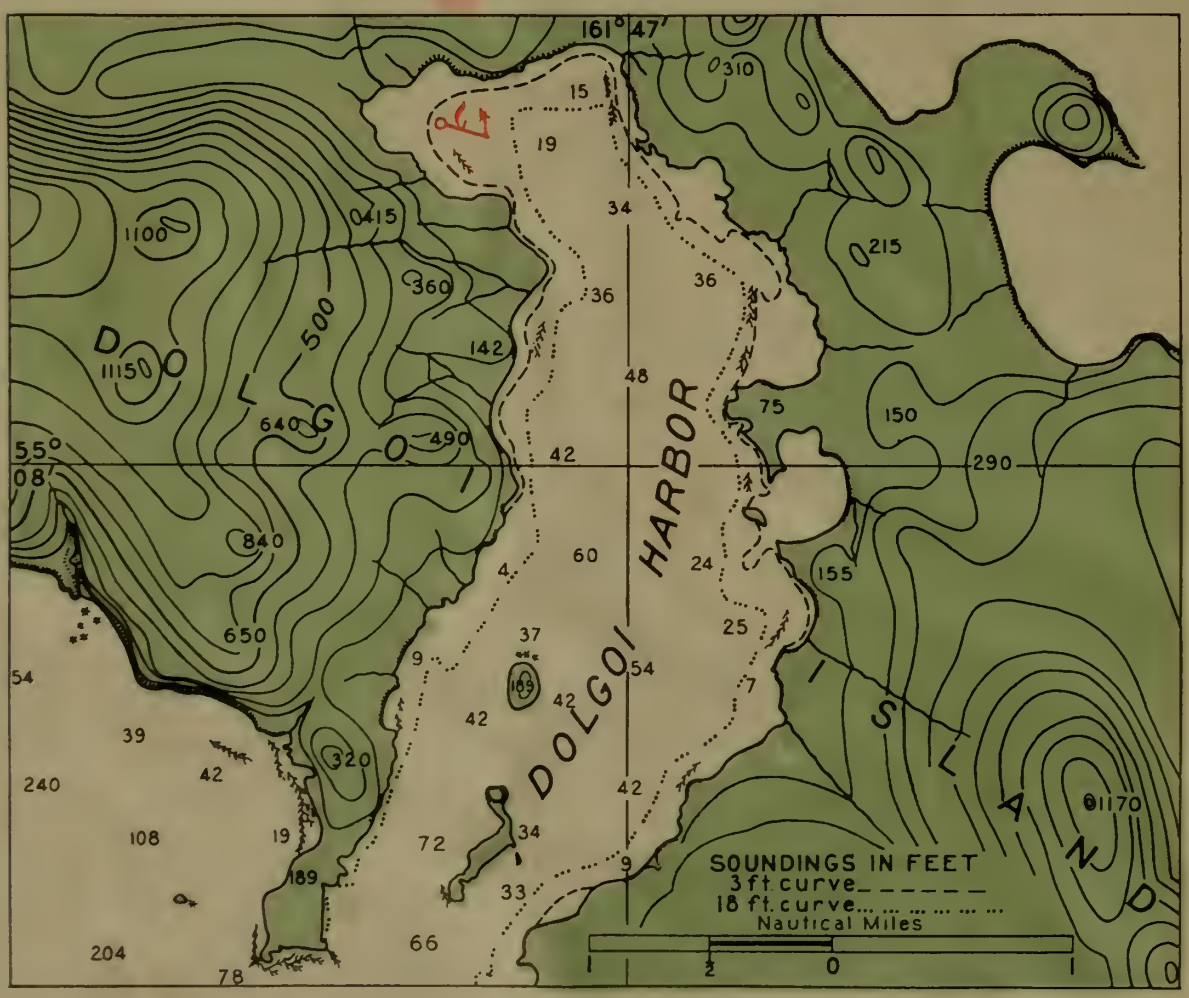
See Notice to Aviators 16 (388) of 1931.

(N. A. 5, 1935.)

H. O. Pub. 188, Naval Air Pilot, Alaska, p. ~~119.~~ 89

116563—35


161°50'
VOLCANO BAY
Fl
UKOLNOI I.
Bear Bay
930
310
1510
1105
2375
2285
2000
DOLGOI HBR
ISLAND
1450
1170
1260
970
Fl.
Golol I.
55°
05'
Belkofski
Belkofski Pt.
F.
Inner Iliasik
8000
1100
1010
Fl.
720
Outer Iliasik
1040
Nautical Miles
0 1 2 3 4 5


161°47'
310
15
19
34
1100
415
215
360
36
142
48
DOLGOI
500
1150
640
490
75
150
55°
08'
42
290
840
60
24
155
650
37
25
54
9
189
42
7
DOLGOI HARBOR
ISLAND
320
240
39
42
108
19
72
34
33
1170
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Miles
204
66
78
1 2 0 1

DOLGOI HARBOR

DOLGOI ISLAND—ALASKA PENINSULA

SEAPLANE ANCHORAGE

(Lat. 55°09′ N., Long. 161°47′ W.)

DESCRIPTION

Location: Dolgoi Harbor, southwest side of Dolgoi Island. **Depth:** 6 to 60 feet. **Tidal range:** 4.7 to 8 feet. **Character of bottom:** Sticky mud. **Currents:** Negligible. **Shelter:** Good, except from strong northerly winds; no williwaws.

LANDING AND TAKE-OFF AREA

Location: Dolgoi Harbor. **Area:** N./S., 4 miles; E./W., ½ to 1 mile. **Shelter:** Good, except from strong northerly winds. **Obstructions:** Shoals and rocks close to shore.

FACILITIES

None, island entirely uninhabited. **Beach** suitable for hauling out; not suitable for amphibians. Monthly mail boat from Seward makes regular stops at Belkofski, a small native village, 9 miles west of Dolgoi Harbor.

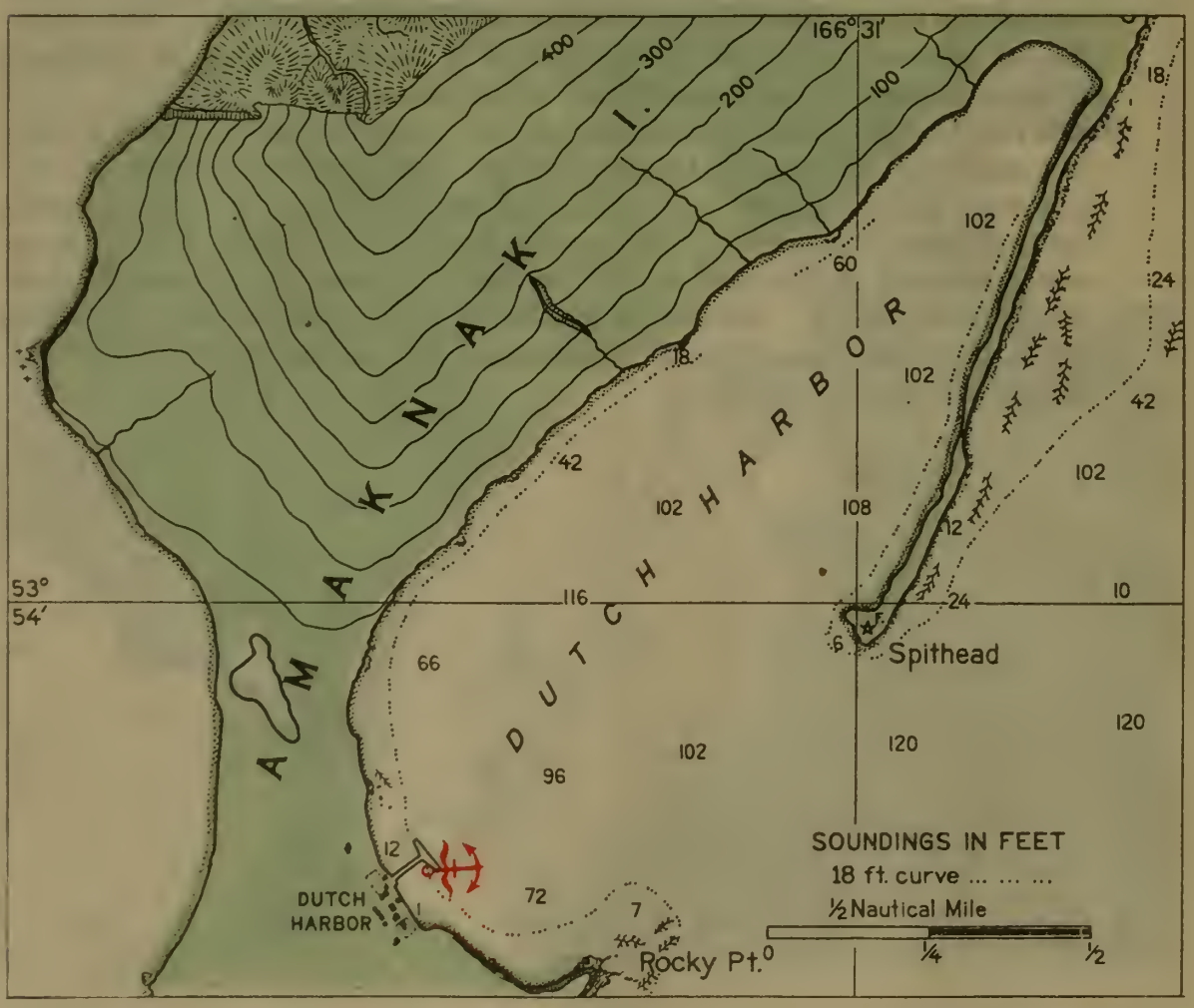
GENERAL INFORMATION

Landmarks: Pavlof Volcano (8,900 feet) 19 miles north-northwest of Dolgoi has three peaks, the middle being the highest. Islands in harbor.

Tender anchorage: Safest and most commodious harbor in this part of Alaska, giving perfect shelter and freedom from williwaws. Pass westward of the first island, then the deeper passage with depths of 6 to 7 fathoms leads between the two islands, the turn is somewhat difficult for long ships, especially during southeast winds. Vessels can take passage west of the upper island which has a depth of about 4 fathoms. Anchorage can be selected anywhere above islands in depths of 7 to 10 fathoms. Best anchorage 1.5 miles northward of the upper island.

Remarks: Dolgoi Island, 11 miles across and grass covered, is divided into two mountain masses by Dolgoi Harbor. The greatest heights at east and west ends are 1,450 and 1,510 feet respectively. The shore is generally abrupt and high. With strong northerly weather, winds sweep across lowland at the head of the harbor with great force, creating considerable sea inside. Even with moderate winds, gusts of 40 to 50 miles per hour sweep down from the mountains on the mainland, and would endanger planes at anchor.


Nautical Miles
0
5
166° 30'
fl. C. Kalekta
UNALASKA
BAY
Cape Cheerful
2314
Eider Pt.
Kalekta Bay
Split Top Mt.
2100
2300
English Bay
Amaknak I.
Ulakta
Hd.
53°
55'
Broad Bay
Hog
Dutch Hbr
Summer
Bay
Brundage Head
1100
Nateekin
Bay
1936
Captains B.
Illulluk Bay
1903
Iliuliuk
Agamgik Bay
Pyramid Pk.
2100
UNALASKA ISLAND
BEAVER INLET
Ugadaga Bay
Udamat Bay
Strait Bay
Uniktali Bay


166° 31'
400
300
200
100
AMAKNAK I.
DUTCH HARBOR
102
60
18
24
42
108
12
116
10
53°
54'
Spithead
66
96
120
72
7
DUTCH
HARBOR
Rocky Pt.
SOUNDINGS IN FEET
18 ft. curve ... ...
½ Nautical Mile
0
¼
½

DUTCH HARBOR

UNALASKA ISLAND—FOX ISLANDS

SEAPLANE ANCHORAGE

(Lat. 53°54′ N., Long. 166°32′ W.)

DESCRIPTION

Location: Dutch Harbor on the west side of Iliuliuk Bay, adjacent to the fuel-oil station. **Depth:** 20 to 60 feet. **Tidal range:** 2 to 6 feet. **Character of bottom:** Mud and rocks. **Currents:** Negligible. **Shelter:** Good. Violent williwaws are experienced during gales, especially southwest, and the best shelter will be found under the high part of the island well northward of the wharf.

LANDING AND TAKE-OFF AREA

Location: Dutch Harbor and Iliuliuk Bay. **Area:** Dutch Harbor, NE./SW., 1½ miles; E./W., 1½ miles; Iliuliuk Bay, NE./SW., unlimited E./,W., ½ to 1½ miles. **Shelter:** Good. **Obstructions:** Radio towers to south; high hills on north and south sides.

FACILITIES

Low-test gasoline and ordinary motor oil are available in quantity. The Alaska Commercial Co. maintains the fuel-oil station and dock. **Poor beach;** short and rocky north of the dock. Small boats available. **Communications:** A naval radio station, call letters NPR, is operated at Dutch Harbor.

GENERAL INFORMATION

Meteorological table: See page 31.

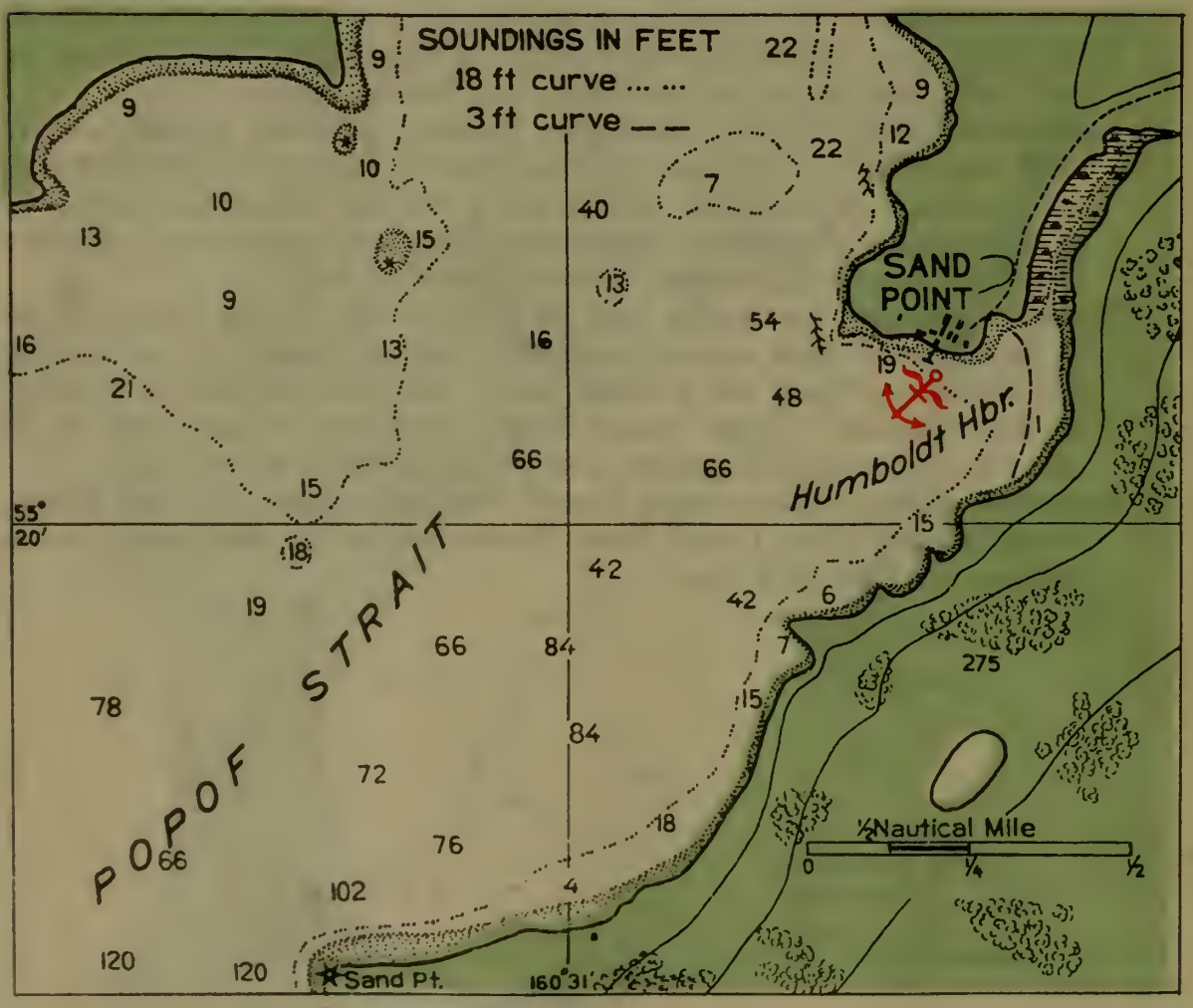
Ice: It is reported that on two occasions the drift ice of Bering Sea entered Unalaska Bay. Ice often forms in the sheltered coves and harbors in cold, calm weather, but never obtains any thickness.

Landmarks: Radio towers. Makushin Volcano, 14 miles west of harbor, 5,691 feet; extinct crater back of Cape Cheerful, 2,314 feet; Ulakta Head, the north end of Amaknak Island, has a flat top breaking off abruptly to sloping sides presents an appearance unlike any other in the vicinity. Two waterfalls on the western shore of Unalaska Bay.

Tender anchorage: Anchorage may be had throughout the harbor in 14 to 19 fathoms. Best shelter under high part of island well northward of the wharf. Wharf has loading face of 350 feet, with a least depth of 32 feet alongside. Large vessels should drop anchor and warp in to wharf to enable them to get away in case of sudden onshore wind.

Remarks: Large, well-protected harbor, although subject to high winds. United States Coast Guard base. Better shelter for seaplanes can be obtained in Iliuliuk Harbor.


160° 30'
ZACHARY BAY
SAND PT.
HUMBOLDT HBR.
POPOF I.
POPOF STRAIT
UNGA ISLAND
BARALOF BAY
ACHEREDIN BAY
UNGA
DELAROF HBR.
55° 17'
Nautical Miles
1 0 1 2 3 4


SOUNDINGS IN FEET
18 ft curve ... ...
3 ft curve _ _
SAND POINT
Humboldt Hbr.
POPOF STRAIT
55° 20'
½ Nautical Mile
0 ¼ ½
Sand Pt.
160° 31'

HUMBOLDT HARBOR

POPOF ISLAND—SHUMAGIN ISLANDS

SEAPLANE ANCHORAGE

(Lat. 55°20′ N., Long. 160°30′ W.)

DESCRIPTION

Location: Humbolt Harbor, adjacent to the wharf at Sand Point. **Depth:** 3 to 30 feet. **Tidal range:** 5 feet. **Character of bottom:** Sand, good holding ground. **Currents:** Negligible. **Shelter:** Good, except from strong southwesterly winds.

LANDING AND TAKE-OFF AREA

Location: Humboldt Harbor and northern part of Popof Strait. **Area:** N./S., 2.5 miles; E./W., ¾ to 2 miles. **Shelter:** Good. **Obstructions:** Reefs.

FACILITIES

Small amount of low-test gasoline and oil may be had in limited quantities. There is a general store where provisions, ship chandlery, and hardware may be obtained. There are slipways on the north side of Sand Point where minor repairs can be made. Good wharf, but no means of hoisting out. Small boats are available. **Communications:** Monthly mail boat from Seward makes regular calls.

GENERAL INFORMATION

Landmarks: Large white frame structure, built as a hotel, located back of the wharf.

Tender anchorage: Anchor 1 mile northeast of Sand Point Light in about 10 fathoms, ¼ mile from shore. Occasional strong southwesterly winds necessitate the use of a second anchor to prevent dragging. Wharf at Sand Point has frontage of 60 feet and depth of about 16 feet alongside.

Remarks: Popof Island is irregular and rough in shape, with hills ranging approximately 1,000 and 1,500 feet high. The highest point, 1,550 feet, is located a short distance northeast of the center of the island. The shores are generally rocky and steep and have many ledges, covered with kelp, extending 200 to 300 yards offshore.


Nautical Miles
0
5
166° 30'
Fl. C. Kalekta
UNALASKA
BAY
Cape Cheerful
2314
Eider Pt.
Kalekta Bay
Split Top Mt.
2100
2300
English Bay
Amaknak I.
Ulakta
Hd.
53° 55'
Broad Bay
Hog
Dutch Hbr.
Summer
Bay
Brundage Head
1100
Nateekin
Bay
1936
Captains B.
Iliuliuk Bay
1903
Iliuliuk
Pyramid Pk.
2100
UNALASKA ISLAND
Agamgik Bay
Ugadaga Bay
BEAVER INLET
Uniktali Bay
Strait Bay
Udamat Bay


SOUNDINGS IN FEET
18 ft. curve ... ...
½ Nautical Mile
0
¼
½
166° 32'
DUTCH
HARBOR
DUTCH
HARBOR
Rocky Pt.
R.Ts.
BAY
ILIULIUK
53° 53'
Iliuliuk Hbr.
Expedition I.
R.T.
ILIULIUK

ILIULIUK HARBOR

UNALASKA ISLAND—FOX ISLANDS

SEAPLANE ANCHORAGE

(Lat. 53°52′30″ N., Long. 166°32′30″ W.)

DESCRIPTION

Location: Iliuliuk Harbor about ½ mile northwest of Unalaska village. **Depth:** 3 to 60 feet. **Tidal range:** 2 to 6 feet. **Character of bottom:** Mud and sand. **Currents:** Negligible. **Shelter:** Good. Violent williwaws are experienced with southerly gales.

LANDING AND TAKE-OFF AREA

Location: Iliuliuk Bay and Dutch Harbor. **Area:** Iliuliuk Bay, NE./SW., unlimited, E./W. ½ to 1½ miles. **Shelter:** Good. **Obstructions:** Radio towers to NE.; high hills to north and south; rocks off village at entrance to harbor.

FACILITIES

Low-test gasoline and ordinary motor oil are available in quantity at Dutch Harbor. The Alaska Commercial Co., maintains a store and warehouses at Unalaska. **Beach** suitable for hauling out; not suitable for amphibians. **Communications:** Monthly mail boat from Seward. Telephone between Unalaska and the naval radio station at Dutch Harbor.

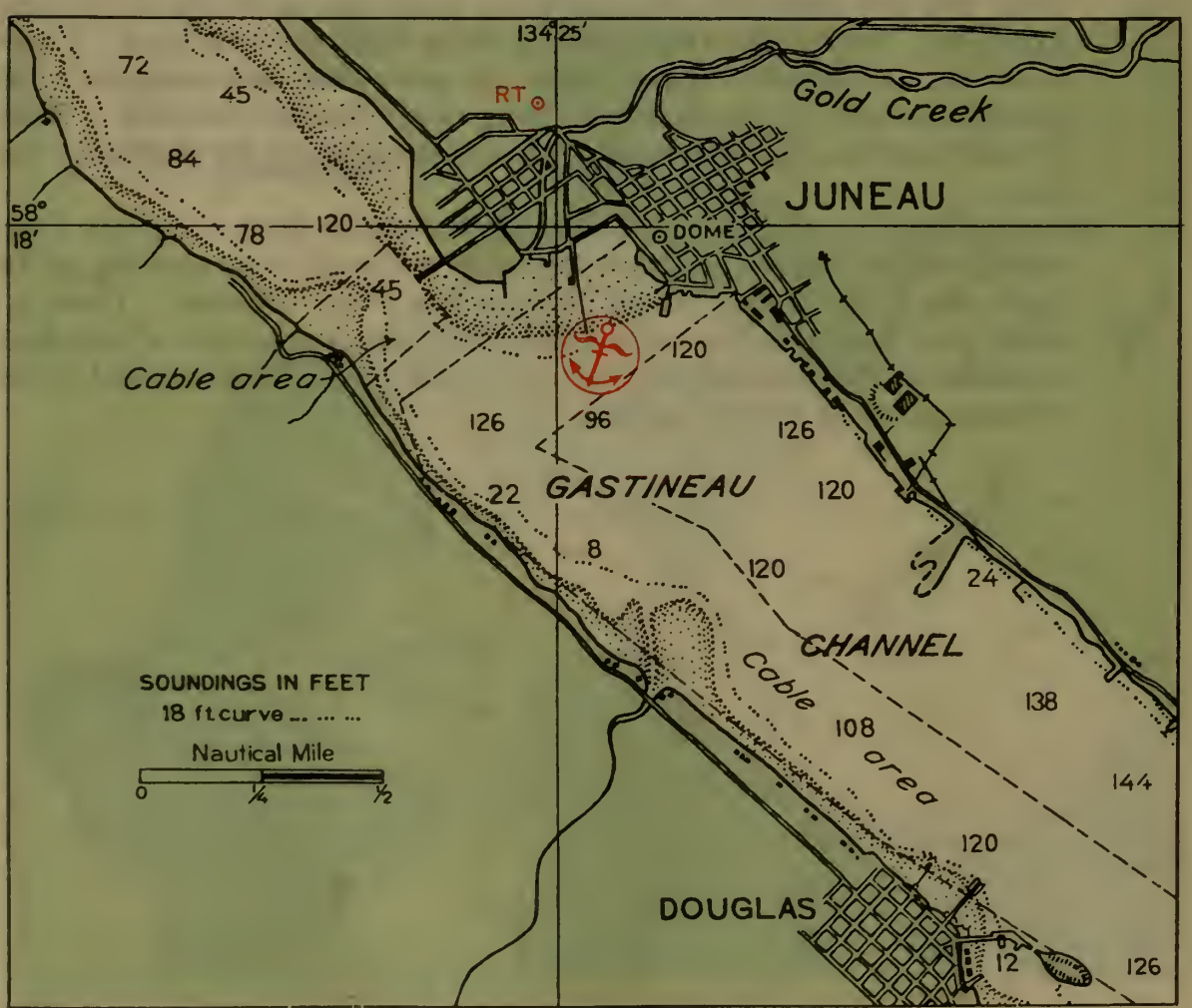
GENERAL INFORMATION. See Dutch Harbor.

Landmarks: Church and buildings.

Tender anchorage: Harbor is small, channel leading into it is suitable for moderate sized vessels only, vessels of 6,000 tons have been taken in and out with assistance. Channel in general use passes southward of Iliuliuk Reef, and southeastward of Tuscarora Rock has least depth of about 5 fathoms. Anchorage is small with average depth of 10 fathoms. Vessels under 200 feet in length have ridden out gales here, short scope of chain allowable usually causes anchors to drag slowly through the mud. Wharf in poor condition, has depths of 4½ to 6 fathoms along its north and west face.

Remarks: Seaplanes anchor in Iliuliuk Harbor off the dock, or in very heavy weather better shelter can be obtained in the small cove opening off the north side of the harbor, where they are safe from williwaws. There is a fairly good beach in this cove and another small one west of the dock. Unalaska is the headquarters for the Coast Guard fleet engaged in the summer patrol of the Bering Sea.


134° 25'
Nautical Miles
1 0 1 2 3
2908
Coghan I.
Spuhn I.
F 2F F
4960
4260
3153
3590
RS(WXA)
JUNEAU
58° 18'
DOUGLAS
3100
3600
4200
2986
3430
3800
3311
DOUGLAS
GASTINEAU CHANNEL
#Thane
2F.I.R.
4210
3297
ISLAND
2510
2850
2870
3333
3600
3415
2838
2890
STEPHEN
2875
Fl.
Tantallon Pt.
PASSAGE
ADMIRALTY
ISLAND
2270
Fl.


134° 25'
72
45
RT
Gold Creek
84
JUNEAU
58° 18'
78
120
DOME
45
120
Cable area
126
96
126
22
GASTINEAU
120
8
120
24
CHANNEL
Cable area
138
108
144
120
SOUNDINGS IN FEET
18 ft curve
Nautical Mile
0 1/4 1/2
DOUGLAS
12
126

JUNEAU

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 58°18′ N., Long. 134°25′ W.)

DESCRIPTION

Location: Gastineau Channel adjacent to the city. **Depth:** 6 to 30 feet. **Tidal range:** 13.8 feet. **Character of bottom:** Mud. **Currents:** 2 knots. **Shelter:** Fair.

LANDING AND TAKE-OFF AREA

Location: Gastineau Channel. **Area:** NE./SW., ½ mile; NW./SE., unlimited. **Shelter:** Good. **Obstructions:** Shoals close ashore; overhead cable crossing channel at north edge of city; occasional floating logs.

FACILITIES

Specification fuel and oil; minor repairs; floating hangar with ramp. **Beach** suitable for hauling out at Thane, 3 miles southeast of Juneau. **Communications:** Army radio station, call letters WXA; cable with points in Alaska and Puget Sound; regular steamship communication with Puget Sound, British Columbia, and the principal ports in Alaska. Telephone and ferry connections with all Gastineau Channel ports. During summer months local airplane service is maintained by several independent companies operating to all points in southeastern Alaska and the interior.

GENERAL INFORMATION

Meteorological table: See page 32.

Landmarks: Gastineau Channel. Docks and radio towers at Juneau.

Tender anchorage: Anchorage can be made throughout Gastineau Channel wherever depth is suitable. Usual anchorage is off Juneau in 20 fathoms. Do not approach shores of channel too closely, especially southern shore. Stream flats and deposits of mine tailings extend well off shore. Several wharves at Juneau having depths of 31 to 40 feet alongside.

Remarks: Port of entry for customs purposes.

(75) ALASKA; JUNEAU; JUNEAU AIRPORT; INFORMATION.—

JUNEAU:

Position.—58°22′ N., 134°33′ W.

Name and location.—Juneau Airport, an emergency-landing field located at the northwestern end of Gastineau Channel, adjacent to the highway, 7 miles northwest of Juneau, Alaska.

Altitude.—Practically sea level.

Description.—The landing field is rectangular in shape, size 2,000 by 300 feet E./W. Surface, gravel and loose dirt. Drainage natural, during high tides the field is under water and becomes soft, but is not dangerous except for planes with very small wheels.

Obstructions.—None.

Marking.—White circle in center; boundary and corner markers.

Lighting.—None.

Facilities.—None.

Remarks.—Satisfactory for any type of landplane.

(N. A. 5, 1935.)

H. O. Aviation Chart V–425.

H. O. Pub. No. 188, Naval Air Pilot, Alaska, p. 99.


134° 00′
Fl. G.
White Sd.
3035
2434
Pt. Macartney
57°
00′
2333
KAKE
KEKU
KEKU ISLETS
STRAIT
Nautical Miles
1 0 1 2 3 4
Pt. Hamilton
Hound I.


133° 57′
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Miles
1 0 1 2 3
408
Pt. Macartney
228
Pt. White
156
384
144
KAKE
KEKU
56°
58′
378
Fl.
75
KEKU ISLETS
STRAIT
312
45
21
294
Pt. Hamilton
138
75
60
27
Hound I.
48
210

KAKE

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 56°58′ N., Long. 133°56′ W.)

DESCRIPTION

Location: Keku Strait adjacent to Kake Village. **Depth:** 3 to 30 feet. **Tidal range:** 10 feet. **Character of bottom:** Gravel. **Currents:** Parallel with shore, weak. **Shelter:** Good except during strong southeast winds.

LANDING AND TAKE-OFF AREA

Location: Keku Strait. **Area:** Unlimited. **Shelter:** Good. **Obstructions:** Buoys; chain of reefs and wooded islets lying 1 mile from shore and parallel to it.

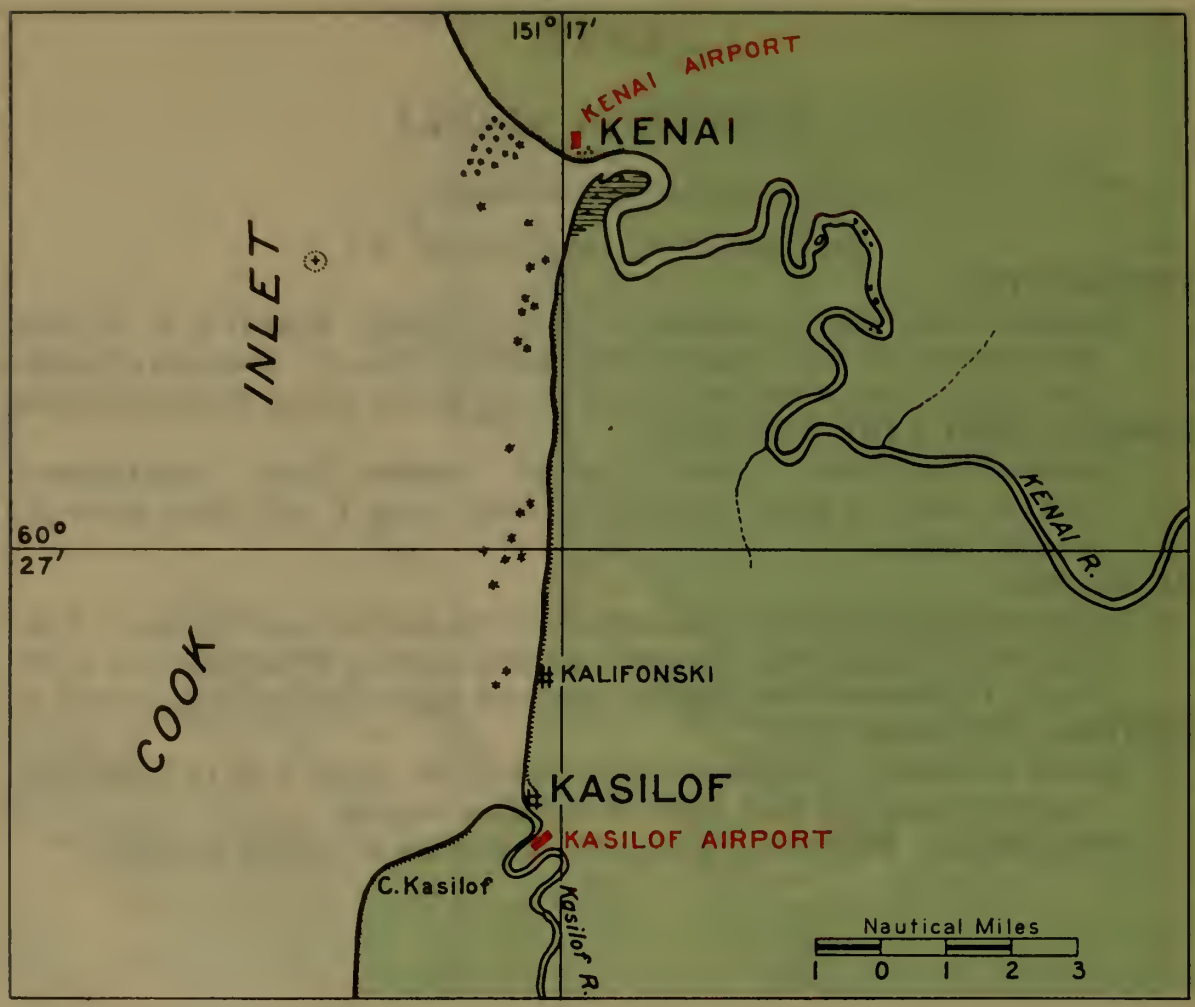
FACILITIES

Small stock of specification fuel and oil during summer months only. Kake is a native village, post office with several wharfs. **Beach,** in front of village. **Communication:** Cannery operates radio station during season.

GENERAL INFORMATION

Tender anchorage: Anchorage can be had off the village in 22 to 24 fathoms. Cannery wharf has least depth of 24 feet alongside.

Meteorological conditions: Precipitation, average annual 52.4 inches.


151° 17'
KENAI AIRPORT
KENAI
INLET
KENAI R.
60°
27'
COOK
KALIFONSKI
KASILOF
KASILOF AIRPORT
C. Kasilof
Kasilof R.
Nautical Miles
1 0 1 2 3


150'
1200'
KASILOF RIVER
KASILOF
RED ROOF

KASILOF

KENAI PENINSULA—COOK INLET

EMERGENCY LANDING FIELD

(Lat. 60°23′ N., Long. 151°18′ W.)

DESCRIPTION

Location: Government landing field located about 2 miles southeast of Kasilof. **Dimensions:** Size, 1,200 by 150 feet. **Surface:** Level sod. **Drainage:** Natural. **Marking:** Wind cone in southeast corner. **Lighting:** None. **Obstructions:** None.

FACILITIES

None. **Communication:** Motor boat to Anchorage. Kasilof is a post office.

GENERAL INFORMATION

Meteorological conditions: *Prevailing winds:* Northeast. *Fog:* December to February.

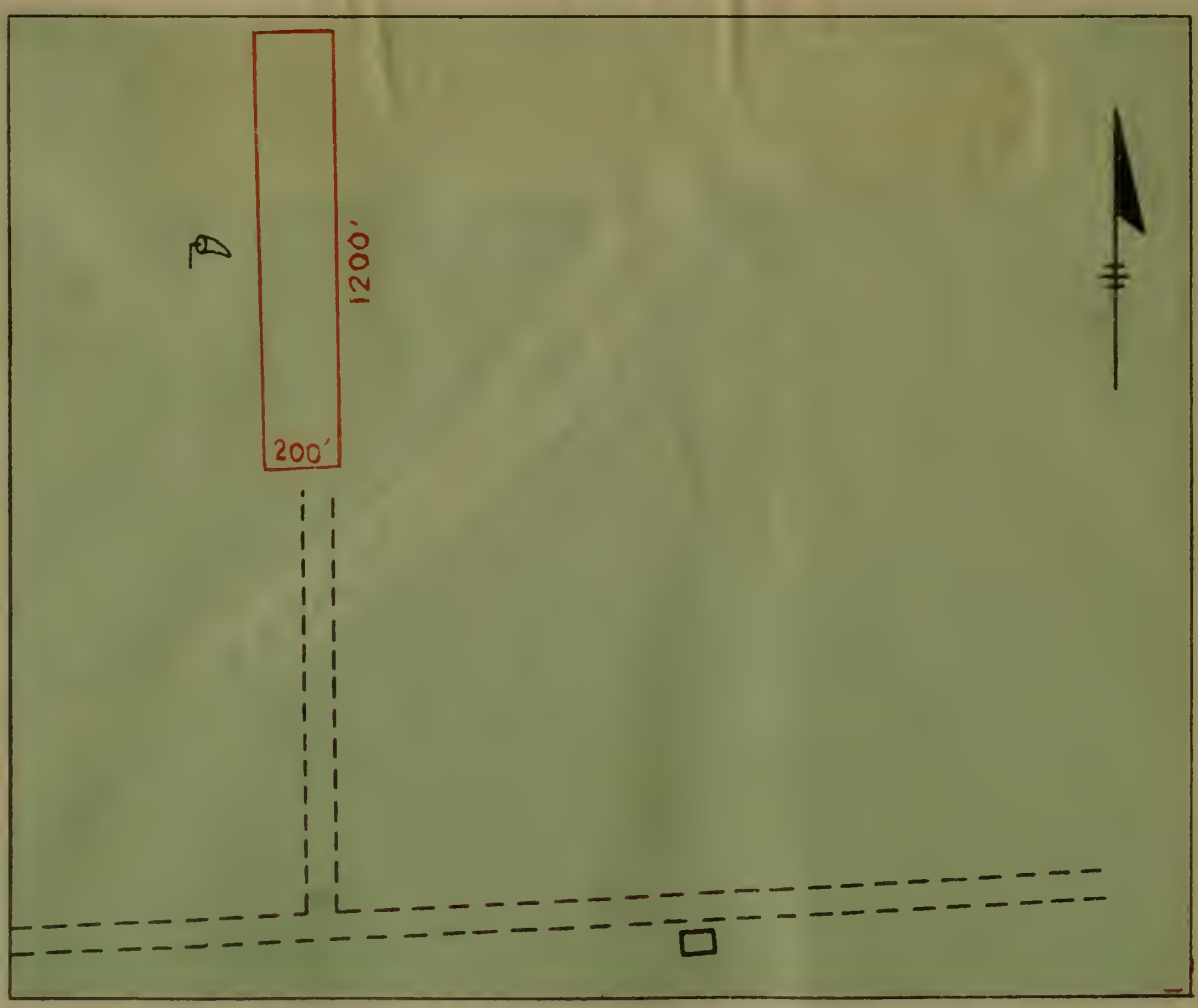
(78) **ALASKA; KASILOF; EMERGENCY LANDING FIELD; INFORMATION.**—The Government emergency landing field, located along the bank of the river about 1¼ miles south of Kasilof, is unmarked and there is no wind sock. The landing area was apparently very rough and it is considered inadvisable to use this field during the winter months.

Approximate position: 60°22′ N., 151°18′ W.

(N. A. 6, 1936.)

H. O. Pub. 188, Naval Air Pilot, Alaska, p. 103.


151° 17'
KENAI AIRPORT
KENAI
INLET
60°
27'
KENAI R.
COOK
KALIFONSKI
KASILOF
KASILOF AIRPORT
C. Kasilof
Kasilof R.
Nautical Miles
1 0 1 2 3


1200'
200'

KENAI

KENAI PENINSULA—COOK INLET

EMERGENCY LANDING FIELD

(Lat. 60°33′ N., Long. 151°15′ W.)

DESCRIPTION

Location: Government landing field located at north edge of Kenai. **Dimensions:** Size, 1,200 by 200 feet. **Surface:** Level sod. **Drainage:** Natural. **Marking:** Wind cone center of west side. **Lighting:** None. **Obstructions:** None.

FACILITIES

None. Kenai is a post office. Two canneries operate here during fishing season.

GENERAL INFORMATION

Meteorological table: See page 33.

(79) **ALASKA; COOK INLET; KENAI; EMERGENCY LANDING FIELD; INFORMATION.—**

KENAI:

Position.—60°33′00″ N., 151°16′30″ W.

Name and location.—Kenai emergency landing field located at the north edge of Kenai.

Altitude.—Approximately 100 feet.

Description.—The landing field is a one way field extending NNE./SSW., with the usable part of the field at the north end, size, 1,200 by 200 feet. Surface, level, sod.

Obstructions.—Trees around the field.

Marking.—None.

Facilities.—None.

Communications.—Private radio (KIUV–2660 kilocycles). Two low frequency radio stations operated by canneries during fishing season.

Meteorological data.—Prevailing winds, northeasterly.

(N. A. 6, 1936.)

H. O. Pub. 188, Naval Air Pilot, Alaska, p. 105.


South
Vallenar Pt.
Peninsula Pt.
Ramp
Ketchikan
Pennock I.
Narrows
GRAVINA I.
Brunn Pt.
California Hd.
Mountain Pt.
Carroll Pt.
Gravina Pt.
Blank Inlet
Bostwick Inlet
NICHOLS PASSAGE
Walden Pt.
Bold I.
ANNETTE I.
Head
Driest Pt.
Hemlock
Copper Pt.
Dall Bay
Dall Head
Fl.
Port Chester
Metlakatla
Fl. Pt. Mc. Cartey
Nautical Miles
0
5
55°
20'
131° 40'


131° 39'
KETCHIKAN
Cannery
Cannery
Cable area
Tongass Narrows
PENNOCK I.
SOUNDINGS IN FEET
18 ft. curve ... ...
½ Nautical Mile
0
¼
½
55°
20'

KETCHIKAN

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 55°22′ N., Long. 131°43′ W.)

DESCRIPTION

Location: Municipal seaplane ramp about 3 miles northwest of Ketchikan. Anchorage is not recommended, owing to depths of 40 to 70 feet with steep banks to the shore and planes are advised to haul out. **Tidal range:** 13 feet. **Currents:** 1.3 knots. **Shelter:** Fair. **Marking:** White cross on red roof of winch house on dock.

LANDING AND TAKE-OFF AREA

Location: Tongass Narrows. **Area:** N/E./SW., ¼ to ½ mile wide; NW./SE., unlimited. **Shelter:** Fair close to Revillagigedo Island. **Obstructions:** Channel buoys; dolphin driven on each side of approach to ramp, 100 feet apart.

FACILITIES

Specification fuel and oil available at float in city; machine shops in city; ramp; marine railway; ordinary port facilities. **Beaches:** Good beaches suitable for hauling out are located at Peninsula Point, 4 miles northwest of Ketchikan, and at Model Dairy, 2¼ miles southeast, of Ketchikan. **Communications:** Army radio station, call letters, WXH, cable; telephone connection with Ketchikan at the ramp and also at each of the beaches; regular steamship communication with Puget Sound and British Columbia ports and with all towns in southeastern and southwestern Alaska. United States Coast Guard keeps a vessel stationed at Ketchikan.

GENERAL INFORMATION

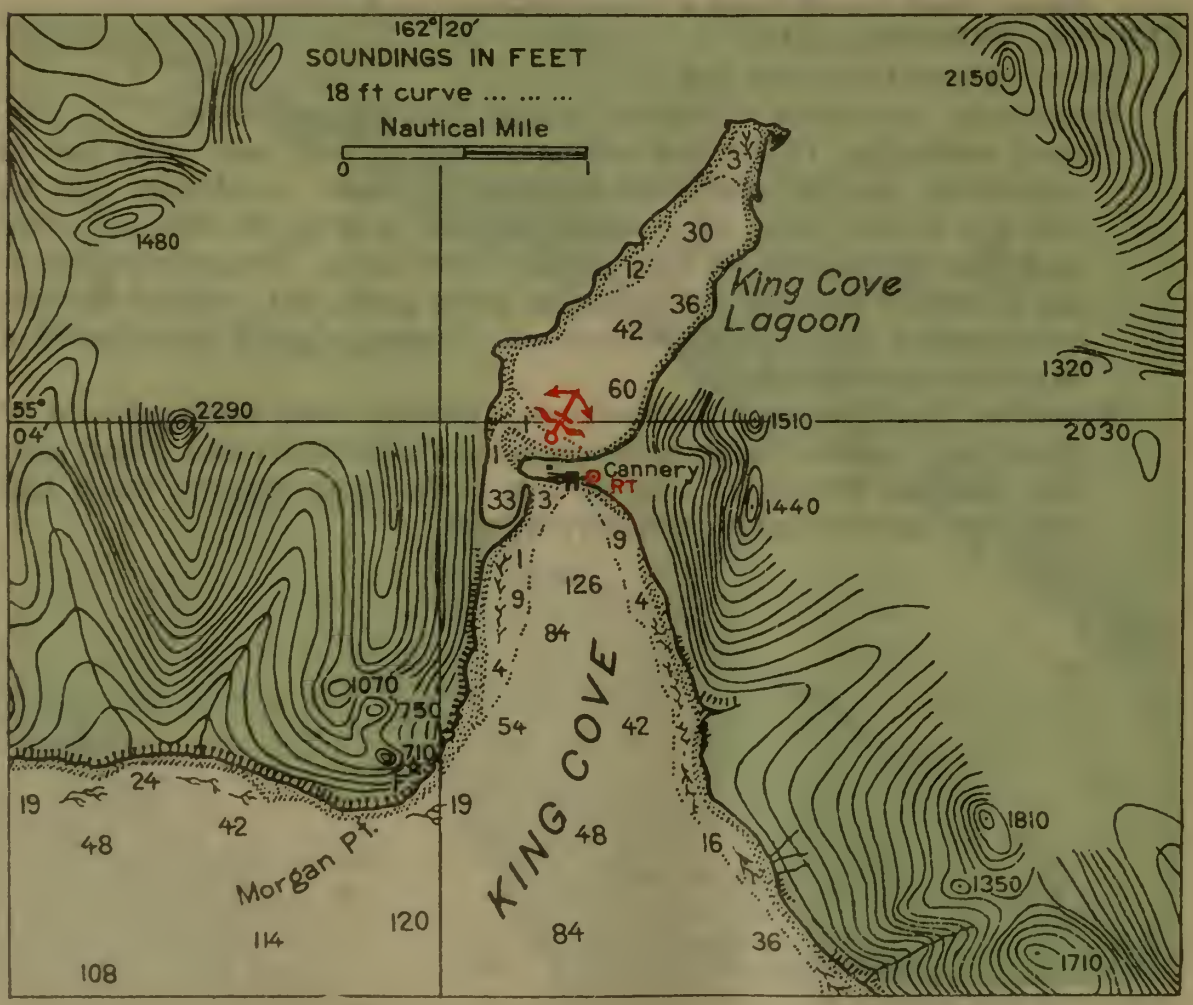
Meteorological table: See page 34.

Landmarks: Abandoned village on Gravina Island opposite ramp.

Tender anchorage: Convenient anchorage can be had near north end of waterfront, selecting anchorage according to draft. Anchorage may be had 200 to 300 yards off steamer wharves in 8 to 20 fathoms. This anchorage is secure for all but heaviest winter gales. Temporary anchorage in about 5 fathoms can be had on rocky patch 250 yards off easternmost steamer dock. Avoid cable areas. Several wharves have depths of 28 feet or more alongside.

Remarks: Good seaplane anchorage is available close southeastward of Ketchikan. Aircraft desiring to use ramp should arrive and depart near high tide, due to the fact that the foot of the ramp uncovers below half tide. Airport of entry for customs purposes.


162° 30'
COLD
BAY.
Kelp Pt.
Lenard Hbr.
2350
2340
2210
1950
2150
2160
2290
1860
cannery
2030
710
1810
Bold Cape
King Cove
Vodapolni Pt.
Lake
55° 545
00'
375
Thin Point Cove
Thin Pt.
Stag Pt.
1295
1950
1800
2060
Fox I.
DEER I.
1670
1510
West C.
630
1100
1680
1660
Nautical Miles
0
5


162°20'
SOUNDINGS IN FEET
18 ft curve ... ...
Nautical Mile
0
1
2150
1480
3
30
12
36
42
60
King Cove
Lagoon
1320
55°
04'
2290
1510
2030
1
Cannery
RT
33
3
1440
9
1
9
126
4
84
4
1070
750
710
54
42
19
24
19
48
42
48
16
1810
Morgan Pt.
KING COVE
1350
120
114
84
36
1710
108

KING COVE

ALASKA PENINSULA

SEAPLANE ANCHORAGE

(Lat. 55°04′ N., Long. 162°19′ W.)

DESCRIPTION

Location: King Cove 6 miles east of Cold Bay. **Depth:** 12 to 60 feet. **Tidal range:** 5 to 8 feet. **Character of bottom:** Mud and rocks. **Currents:** Negligible. **Shelter:** Poor, subject to violent williwaws which sweep across bay from all points. Excellent holding ground.

LANDING AND TAKE-OFF AREA

Location: King Cove and Deer Island Passage. **Area:** King Cove, N./S., 1 mile, E./W., ½ mile; Deer Island Passage, unlimited. **Obstructions:** Mountains on both sides; shoals and rocks close to shore.

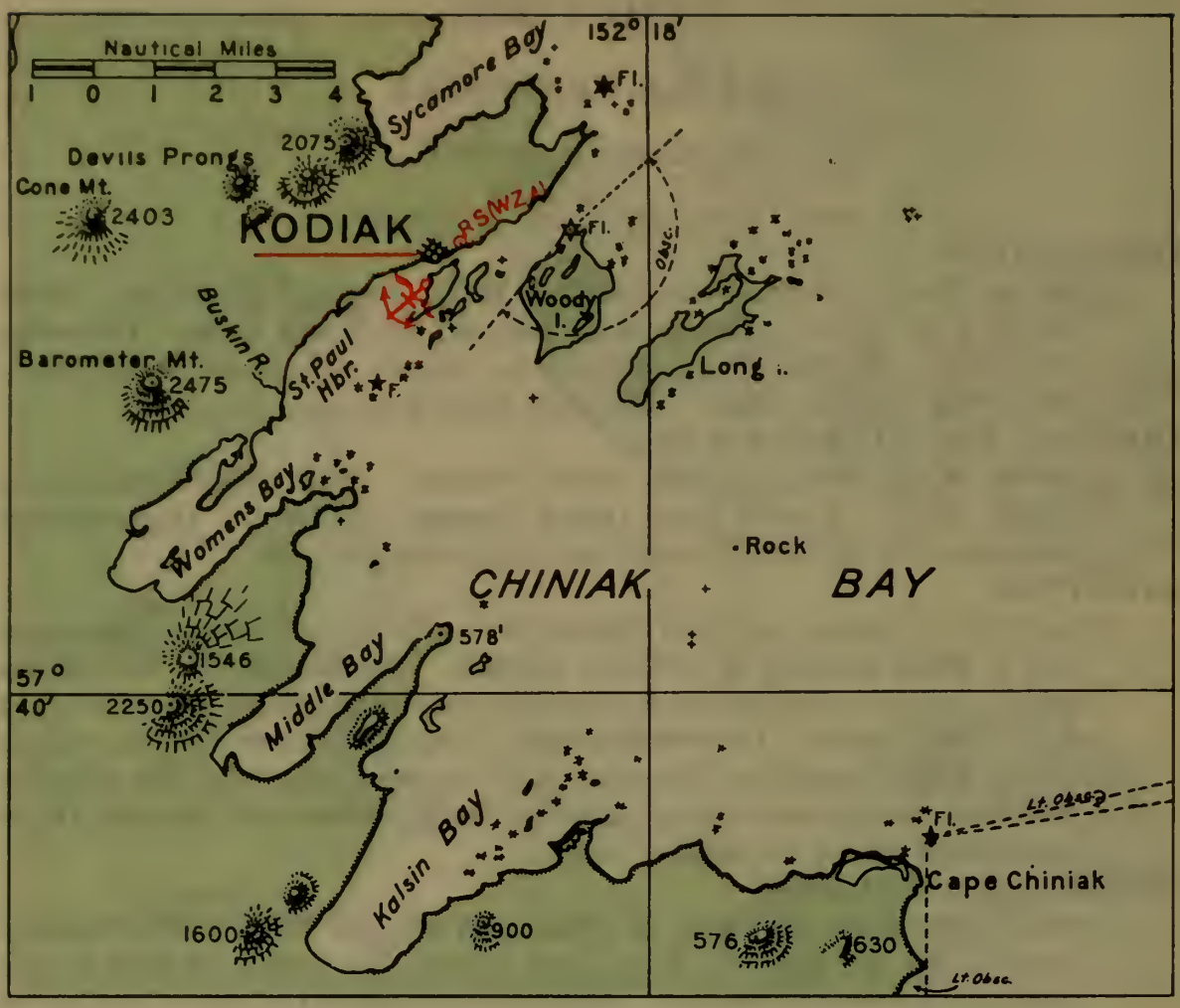
FACILITIES

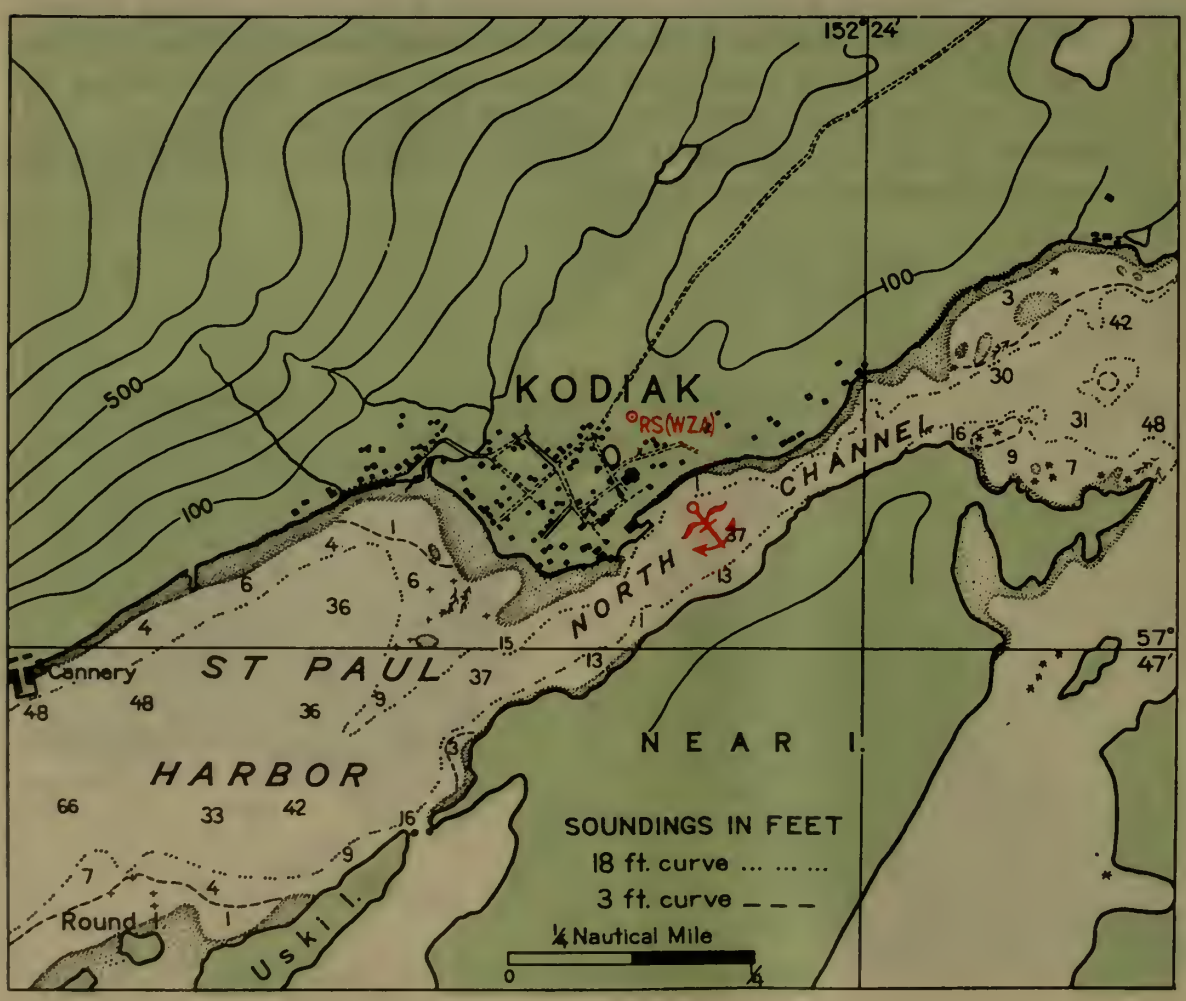
King Cove, a cannery and post village, has a slipway, a good machine shop, and a small amount of low-test gasoline. **Beach,** smooth and slopes evenly, is located on the spit forming the northern shore of the entrance to King Cove Lagoon. **Communications:** During the summer season vessels of the Pacific American Fisheries make regular calls, and the monthly mail boat from Seward calls regularly. Radio station, call letters KJK, is maintained during the cannery season.

GENERAL INFORMATION

Tender anchorage: Anchor in 16 fathoms ½ mile off wharf about midway between the two shores. King Cove Lagoon has depths of from 5 to 8 fathoms over most of the area. Basin at southern end of lagoon has depths of 5 to 7 fathoms where floating equipment of cannery is usually moored. There is a depth of 4 feet in the narrow entrance; vessels of 6 feet draft and less than 100 feet in length can enter at high water. Boats drawing not more than 3 feet can continue to northern basin at high water.

Remarks: King Cove Lagoon at the head of King Cove extends in a northeasterly direction for nearly 2 miles.


Nautical Miles
1 0 1 2 3 4
Sycamore Bay
152° 18'
Fl.
2075
Devils Prongs
Cone Mt.
2403
KODIAK
RS(WZA)
Fl.
Woody I.
Obsc.
Buskin R.
St. Paul Hbr.
Barometer Mt.
2475
Long I.
Womens Bay
Rock
CHINIAK BAY
578'
1546
57° 40'
2250
Middle Bay
Kalsin Bay
Fl.
Lt. Obsc.
Cape Chiniak
1600
900
576
1630
Lt. Obsc.


152° 24'
100
500
KODIAK
RS(WZA)
CHANNEL
NORTH
ST PAUL
HARBOR
NEAR I.
Cannery
57° 47'
Round I.
USKI I.
SOUNDINGS IN FEET
18 ft. curve ... ...
3 ft. curve _ _ _
¼ Nautical Mile
0 ¼

KODIAK

KODIAK ISLAND

SEAPLANE ANCHORAGE

(Lat. 57°47′ N., Long. 152°24′ W.)

DESCRIPTION

Location: Northwestern side of North Channel, close northeastward of the oil dock at Kodiak. **Depth:** 3 to 30 feet. **Tidal range:** 6.9 feet. **Character of bottom:** Mud and sand. **Currents:** 1 to 4 knots. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: North Channel and St. Paul Harbor. **Area:** North Channel, NE./SW., 1 mile by 100 yards; St. Paul Harbor, unlimited. **Obstructions:** High, wooded hills along shore line; beacons and buoys; shoals along shore; several islands in St. Paul Harbor.

FACILITIES

Specification fuel and oil at dock and via small boats; a float that can be approached by planes is located at the north end of the oil dock; minor repairs; marine railway. Small boat available. **Beach** suitable for hauling out close northeast of anchorage, not suitable for amphibians; the beach for a distance of 500 feet along the northerly shore of St. Paul Harbor is suitable for hauling out. **Communications:** Army radio station call letters, WZA, north of Kodiak. Mail boats from Seattle and Seward makes regular calls.

GENERAL INFORMATION

Meteorological tables: See p. 35.

Landmarks: Oil tanks adjacent to oil dock; church; name "W. J. Erskine Co." painted in white on warehouse on dock. Devils Prongs are three peaks, 2.5 miles northwest of Kodiak. The northern prong is 2,075 feet high.

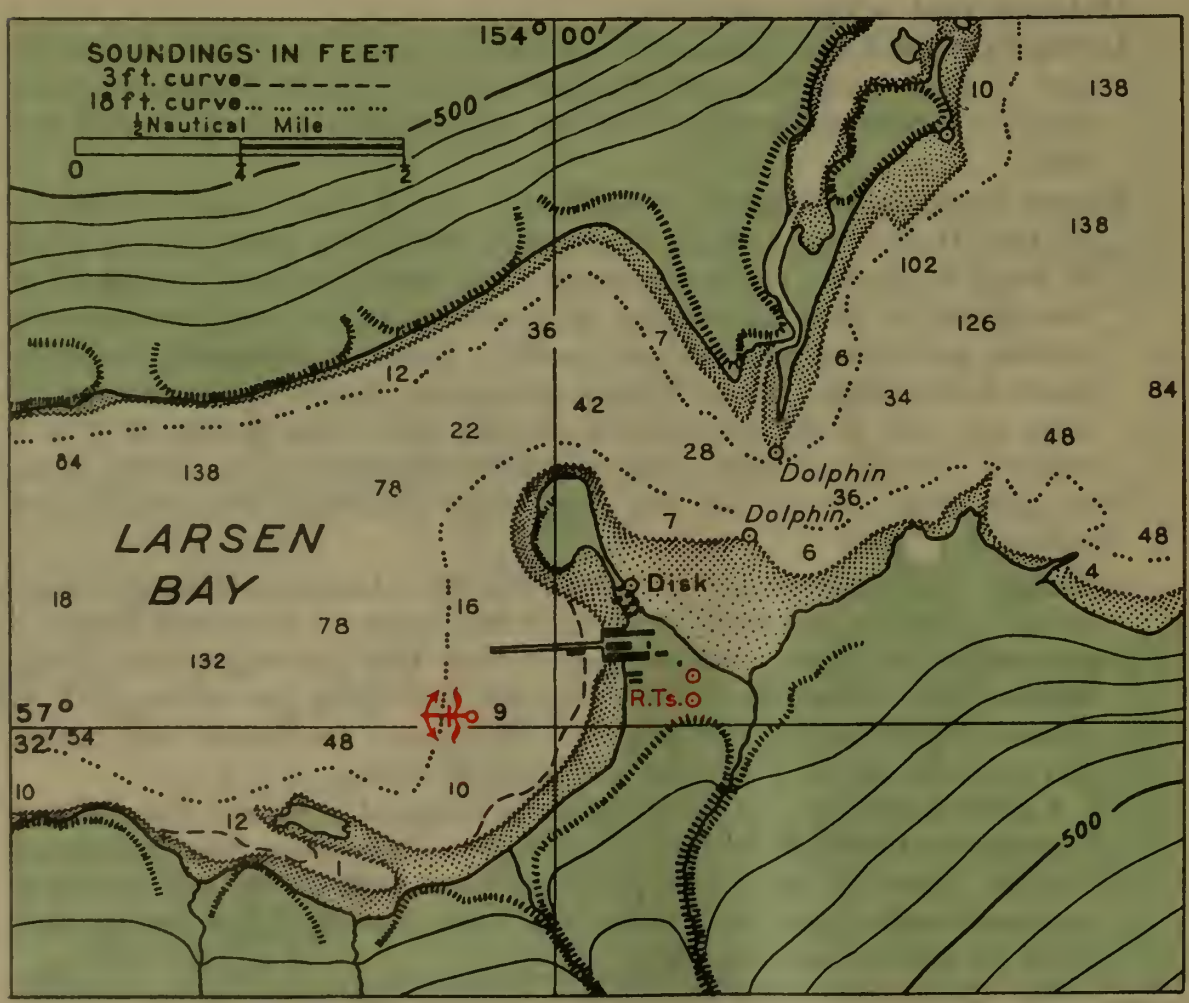
Tender anchorage: Channel on northwest side of Near Island leading to St. Paul Harbor has a depth of about 26 feet and a width of only 50 to 60 yards in places. Outer anchorage is off Shahafka Cove, northward of Near Island in 13 to 14 fathoms, good anchorage, but not convenient, is exposed to considerable sea and swell in heavy northeasterly weather. Inner anchorage, known as Winter Anchorage, ½ mile southwestward of town and 250 to 300 yards from western shore, has depths of 7 to 8 fathoms. Good anchorage, but williwaws are heavy, and vessels occasionally drag. Wharf 250 feet long, with depths of 21½ to 28½ feet alongside.

Remarks: The inner harbor is well protected. Additional safe moorings could be found in the small bay west of the cannery. The outer harbor is exposed to the south. The land on Kodiak Island is rugged and mountainous, with elevations of 2,000 to 3,000 feet along the shores, and in exceess of 4,500 feet in the interior. The shores are rugged and rocky, and are indented by numerous deep narrow inlets.

A good anchorage with beach may also be found in Gibson Bay, located 1.5 miles southwest of Kodiak. The water area between Near Island and Holiday Island is fairly well protected from most winds and affords a seaplane landing area; there are several good beaches in this vicinity that could be used for hauling out.

For planes operating with a tender, better anchorage could be found in Uyak Bay—Larsen Bay.


153° 57′
Bear I.
Harvester I.
1190′
UYAK
F.R.
1230′
UYAK BAY
1780′
1968′
2080′
1966′
2063′
LARSEN BAY
Spiridon Bay
2655′
2710′
2831′
2650′
3391′
3261′
2600′
Zachar Bay
1209′
2699′
3725′
Cannery
2066′
2200′
57° 30′
2702′
AMOOK I.
1686′
Nautical Miles
1 0 1 2 3 4
Mining Camp
3700′
3350
3470′
2880′
3123′
3270′
4158′


SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
½ Nautical Mile
0 ¼ ½
154° 00′
500
10
138
138
102
126
36
7
6
12
42
34
84
22
28
48
84
138
78
Dolphin
36
Dolphin
7
6
48
4
LARSEN BAY
18
16
78
Disk
132
R.Ts.
57° 32′ 54
9
48
10
10
12
1
500

LARSEN BAY

UYAK BAY—KODIAK ISLAND

SEAPLANE ANCHORAGE

(Lat. 57°32′ N., Long. 154°00′ W.)

DESCRIPTION

Location: Larsen Bay, on the west side of Uyak Bay, 6 miles south of Uyak village. **Depth:** 6 to 48 feet. **Tidal range:** 11 feet. **Character of bottom:** Mud and rocky, good holding ground. **Currents:** Strong tidal current sweeps through entrance, estimated maximum velocity of 4 to 5 knots. **Shelter:** Fair. Westerly winds blow down bay with great force.

LANDING AND TAKE-OFF AREA

Location: Larsen Bay and Uyak Bay. **Area:** Larsen Bay, N./S., 500 to 1,400 yards, E./W., 4 miles; Uyak Bay, unlimited. **Shelter:** Good. **Obstructions:** High, wooded hills along shoreline.

FACILITIES

Large cannery in operation from June to September, at other times a caretaker is present. Small amount of low-test gasoline, small boats, and limited accommodations for personnel. Good wharf, but no means of hoisting out. **Beach** near cannery wharf suitable for hauling out; not suitable for amphibians. **Communications:** Radio station, call letters KHA, maintained during the fishing season. Monthly mail boat from Seward makes regular calls at Uyak.

GENERAL INFORMATION

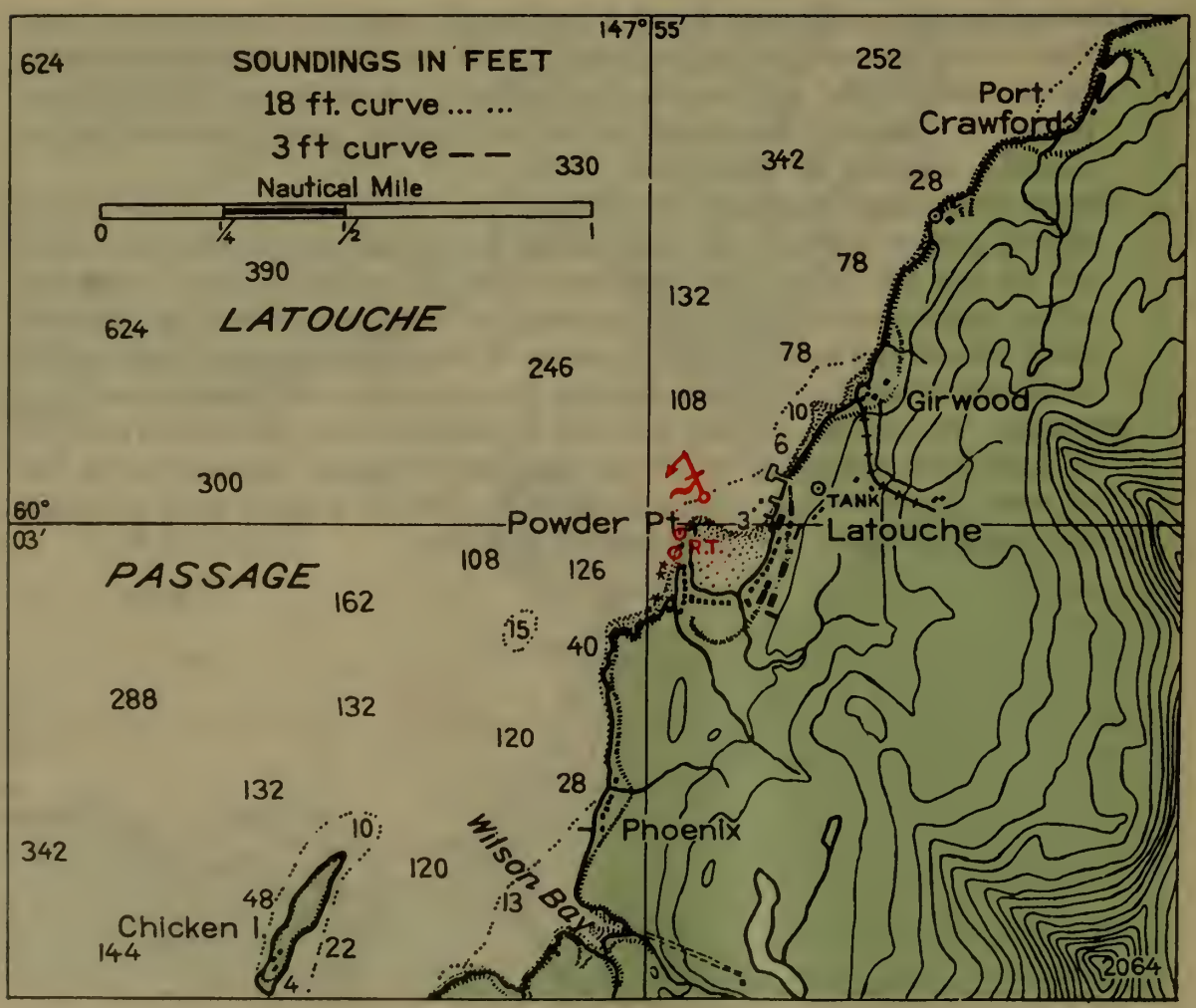
Meteorological conditions: *Prevailing winds:* Southwest in summer, northwest in winter. *Fog:* Rare.

Landmarks: Cape Karluk, 3 miles southwest from the entrance to Uyak Bay, is a prominent projecting head, 1,438 feet high. Readily identified by its cone-shaped appearance, a notch in the summit, and the low land behind it. Most conspicuous landmark on the west coast of Kodiak Island. Cannery at Larsen Bay.

Tender anchorage: Entrance is through a narrow, crooked channel which carries a least depth of 24 feet. Good anchorage for larger-type vessels can be had 400 yards northwestward from the small island on south side of bay, and about 700 yards off the cannery wharf, in depths of 20 fathoms. Small vessels can enter bay at any stage of tide; large vessels should choose a high-water slack with calm weather for entering or leaving.

Remarks: The shores of Uyak Bay rise in steep slopes to elevations of 2,000 to 4,000 feet, and there are many mountain streams. Larsen Bay is one of many excellent natural anchorages on Kodiak Island, most of which have approximately the same limited facilities.


147° 50'
The Needle
Nautical Miles
0
5
Pt. Grace
Evans I.
1655
2351
1952
Fl.
Fl.
LATOUCHE TANK
2064
1790
60° 00'
Elrington I.
Latouche Passage
LATOUCHE I.
2255
MONTAGUE STRAIT
Pt. Bazil
Hanning Bay
2030
MONTAGUE I.
2645
Woodcock Pt.
Macleod Hbr.
2420


147° 55'
624
SOUNDINGS IN FEET
18 ft. curve ... ...
3 ft curve — —
Nautical Mile
0
¼
½
1
330
390
624
LATOUCHE
246
300
252
Port Crawford
342
28
78
132
78
108
10
6
Girwood
TANK
60° 03'
Powder Pt.
3
Latouche
PASSAGE
108
126
162
15
40
288
132
120
132
28
Phoenix
342
10
120
Wilson Bay
48
13
Chicken I.
144
22
4
2064

LATOUCHE

LATOUCHE ISLAND—PRINCE WILLIAM SOUND

SEAPLANE ANCHORAGE

(Lat. 60°04′ N., Long. 147°55′ W.

DESCRIPTION

Location: Latouche Passage adjacent to Latouche Village, 70 miles southwest of Cordova. **Depth:** 3 to 42 feet. **Tidal range:** 9.2 feet. **Character of bottom:** Mud and rocks. **Currents:** Moderate. **Shelter:** Good. **Obstructions:** Reef 300 yards north of wharf; rocks 80 yards north of wharf.

LANDING AND TAKE-OFF AREA

Location: Latouche Passage. **Area:** NE./SW., 7 miles by ¾ to 1 mile. **Shelter:** Good.

FACILITIES

Latouche, a post office on west side of Latouche Island has a store and is the site of a copper mine. Fuel oil of good qualtiy is available. Well-equipped machine shops and hospital. **Communications:** Radio station KIM operated by the mining compnay. Coastwise steamers from Seattle make regular calls throughout the year.

GENERAL INFORMATION

Meteorological tables. See page 36.

Tender anchorage: Anchorage can be had 300 to 500 yards west-northwestward from wharf in 10 to 15 fathoms. Wharf has a loading face of 200 feet with a least depth of 20 feet alongside. On southern side of wharf there is a float landing with a least depth of 10 feet alongside.

Vessels approach dock from northward and on strong ebb current it is difficult for large single-screw steamers to make landing. Vessels leaving the wharf usually swing bow in and back out.

Remarks: Latouche Island 10 miles long with elevations up to 2,255 feet is wooded to an elevation up to 500 feet and above this is covered with moss and bushes except highest peaks, which are bare rocks. The eastern shore is precipitous and the 10-fathom curve less than one-fourth mile off in places.


137° 35'
7962
MT. CRILLON
12,727
LITUYA BAY
Fl. Harbor Pt.
3,318
58°
35'
9,707
CRILLON GLACIER
6,000
Nautical Miles
1 0 1 2 3 4


137° 40'
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Mile
0 2
42
28
12
25
40
264
390
288
BAY
360
342
Anchorage Cove
24
13
36
LITUYA
210
306
48
31
GULF OF ALASKA
58°
37'
156
37
28
La Chaussee Spit
66
54
37
10
540
The Paps
4
345
72
72
12
Fl. Harbor Pt.
Obsc
34
90
96
90
31

LITUYA BAY

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 58°37′ N., Long. 137°40′ W.)

DESCRIPTION

Location: Anchorage Cove on northern side of entrance to Lituya Bay. **Depth:** 12 to 30 feet. **Tidal range:** 7 feet. **Character of bottom:** Hard sand. **Currents:** At entrance 8 knots on neap tides, 12 knots on spring tides. **Shelter:** Good. **Obstructions:** On flood tide with southerly weather there is considerable swell at this anchorage; Cenotaph Island.

LANDING AND TAKE-OFF

Location: Lituya Bay. **Area:** N./S., 1 to 2 miles; NE./SW., 6½ miles. **Shelter:** Good.

FACILITIES

None. Two abandoned shacks on northwest shore of Anchorage Cove. No beach. Cenotaph Island is used for a fox farm, the buildings being located on western side of island.

GENERAL INFORMATION

Ice: Bay has never been known to freeze over, icebergs are always found in upper end of bay. With northeasterly breezes icebergs often reach entrance of bay before melting. Ice is usually heaviest during month of October. The many streams flowing from the glaciers at the head of bay give the water a murky, discolored appearance.

Tender anchorage: Lituya Bay affords protected anchorage in all weather when once inside. Entrance is dangerous and on account of strong currents should never be attempted except at slack water. Ebb currents running out against a southwest swell, cause bad topping seas across entire entrance. Ebb current flows in a narrow stream for several miles out to sea and can be seen at a distance of several miles, forming a prominent mark for the entrance. On flood tide entrance is smooth. No attempt to enter should be made, without local knowledge, except at slack water which lasts from 10 to 20 minutes. Channel has a width of 80 yards, the average depth being 5 to 7 fathoms. Anchorage can be had in Anchorage Cove in depths varying from 4 to 7 fathoms. On a flood tide with southerly weather there is considerable swell and small vessels usually seek an anchorage farther up the bay.

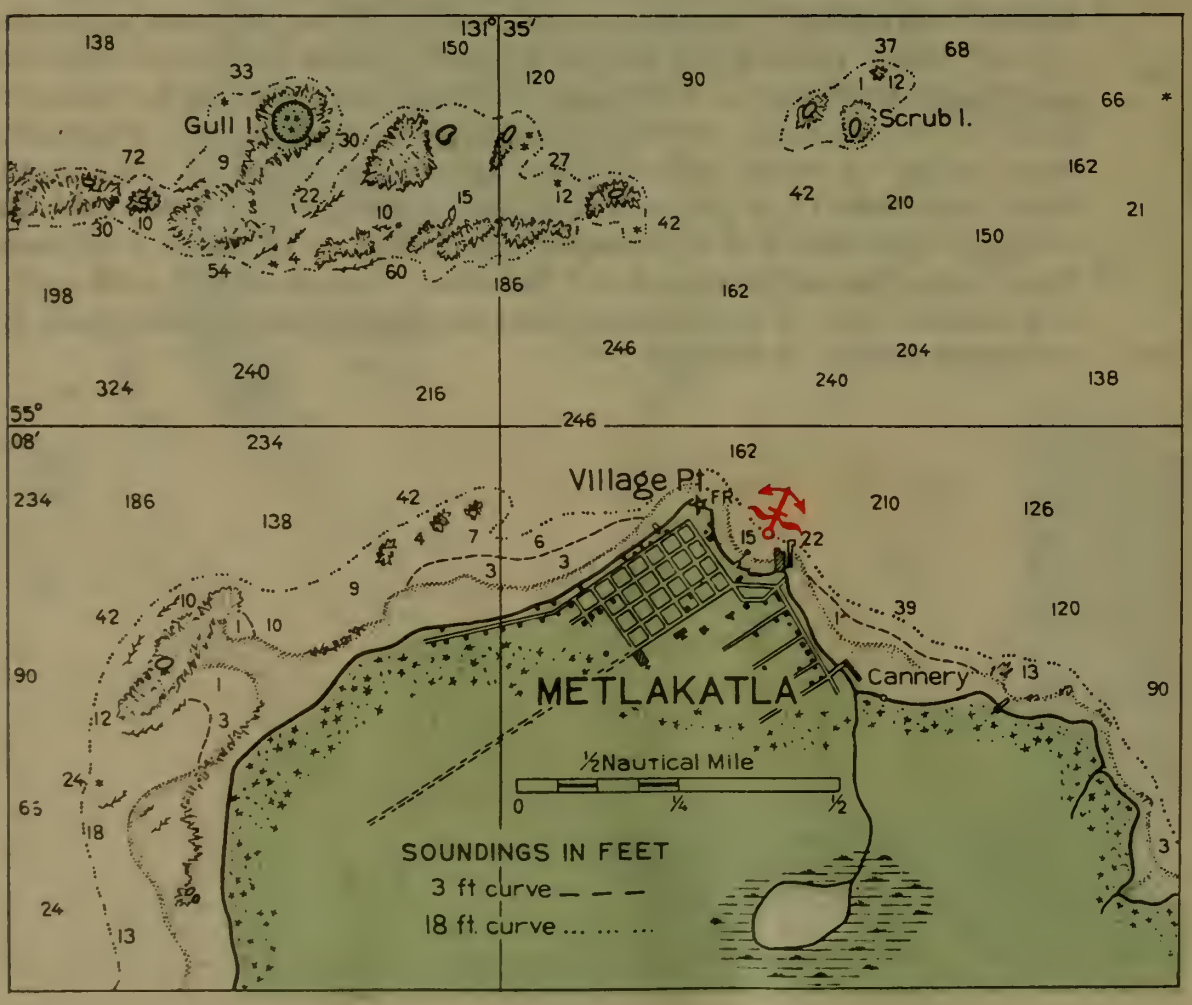
(76) ALASKA; LITUYA BAY; SEAPLANE ANCHORAGE; INFORMATION.—Anchorage Cove, on the northern side of Lituya Bay, is not recommended as a seaplane anchorage. It is believed that the best anchorage in the bay is in the lee (usually to the eastward) of Cenotopah Island.

Approximate position of Anchorage Cove: 58°37′ N., 137°40′ W.

(N. A. 5, 1935.)

H. O. Pub. No. 188, Naval Air Pilot, Alaska, p. 117.


South Vallenar Pt.
131° 40'
Peninsula Pt.
Ramp
Ketchikan
Brunn Pt.
55° 20'
GRAVINA I.
Pennock I.
Mountain Pt.
California Hd.
Carroll Pt.
Gravina Pt.
Blank Inlet
NICHOLS PASSAGE
Walden Pt.
Bold I.
ANNETTE I.
Bostwick Inlet
Driest Pt.
Hemlock I.
Copper Pt.
Dall Bay
Dall Head
Fl.
Port Chester
Metlakatla
Fl. Pt. Mc. Cartey
Nautical Miles
0
5


131° 35'
Gull I.
Scrub I.
55° 08'
Village Pt.
FR
METLAKATLA
Cannery
½Nautical Mile
0
¼
½
SOUNDINGS IN FEET
3 ft curve _ _ _
18 ft. curve ... ...

METLAKATLA

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 55°08′ N., Long. 131°34′ W.)

DESCRIPTION

Location: South side of Port Chester Harbor east of Village Point, adjacent to Metlakatla. **Depth:** 3 to 20 feet. **Tidal range:** 12.7 feet. **Character of bottom:** Mud. **Currents:** 1.5 knots. **Shelter:** Fair, subject to williwaws.

LANDING AND TAKE-OFF AREA

Location: Port Chester Harbor and Nichols Passage. **Area:** Port Chester Harbor, N./S., ¼ to 1 mile. E./W., 6 miles; Nichols Passage, unlimited. **Shelter:** Fair. **Obstructions:** Clusters of rocks and reefs.

FACILITIES

Metlakatla is a native mission and post office. There is a store, and provisions in limited quantities can be obtained. There is also a blacksmith shop. The city wharf is a small wharf and float on the west side of Village Point. **Beach:** Gravel beach on the eastern side of Village Point.

GENERAL INFORMATION

Meteorological data: During southeasterly gales winds blow with great violence across Port Chester Harbor and williwaws of almost hurricane force sweep down from Purple Mountain and across the anchorage. **Precipitation:** Annual average, 112.16 inches.

Landmarks: Yellow Hill (525 feet) is a marked yellow-topped hill 1.5 miles south of Metlakatla. The summit is formed by several bare, rounded knolls of approximately equal elevation. White church with two square towers at Metlakatla is conspicuous from Nichols Passage.

Tender anchorage: Port Chester does not afford good anchorage. Vessels usually make a port landing. Cannery wharf east of Village Point has a least depth of 23 feet alongside near the center with deeper water toward ends.


151° 40′
COOK INLET
Ninilchik R.
NINILCHIK
NINILCHIK AIRPORT
Deep Cr.
60° 00′
Nautical Miles
1 0 1 2 3 4
1900


COOK INLET
Bluff 200′
NINILCHIK
1335′
240′
Bluff 200′

NINILCHIK

KENAI PENINSULA—COOK INLET

EMERGENCY LANDING FIELD

(Lat. 60°03′ N., Long. 151°40′ W.)

DESCRIPTION

Location: Government field located opposite side of stream from Ninilchik and directly opposite a high bluff. **Altitude:** 30 feet. **Dimensions:** Size, 1,335 by 240 feet. **Surface:** Flat. **Drainage:** Natural. **Marking:** 2 posts, 10 feet high, at each end of field; wind cone at northwest corner. **Lighting:** None.

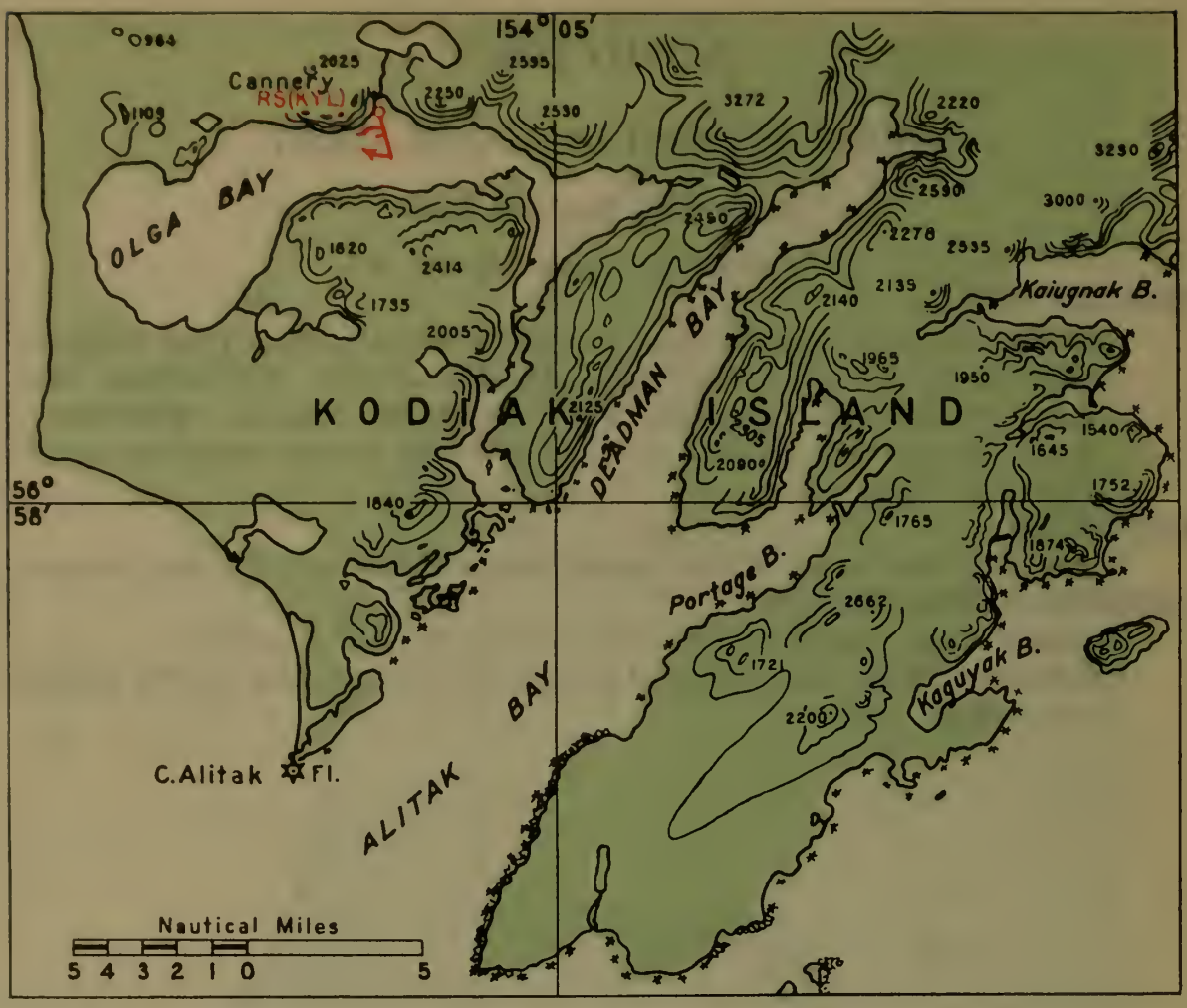
FACILITIES

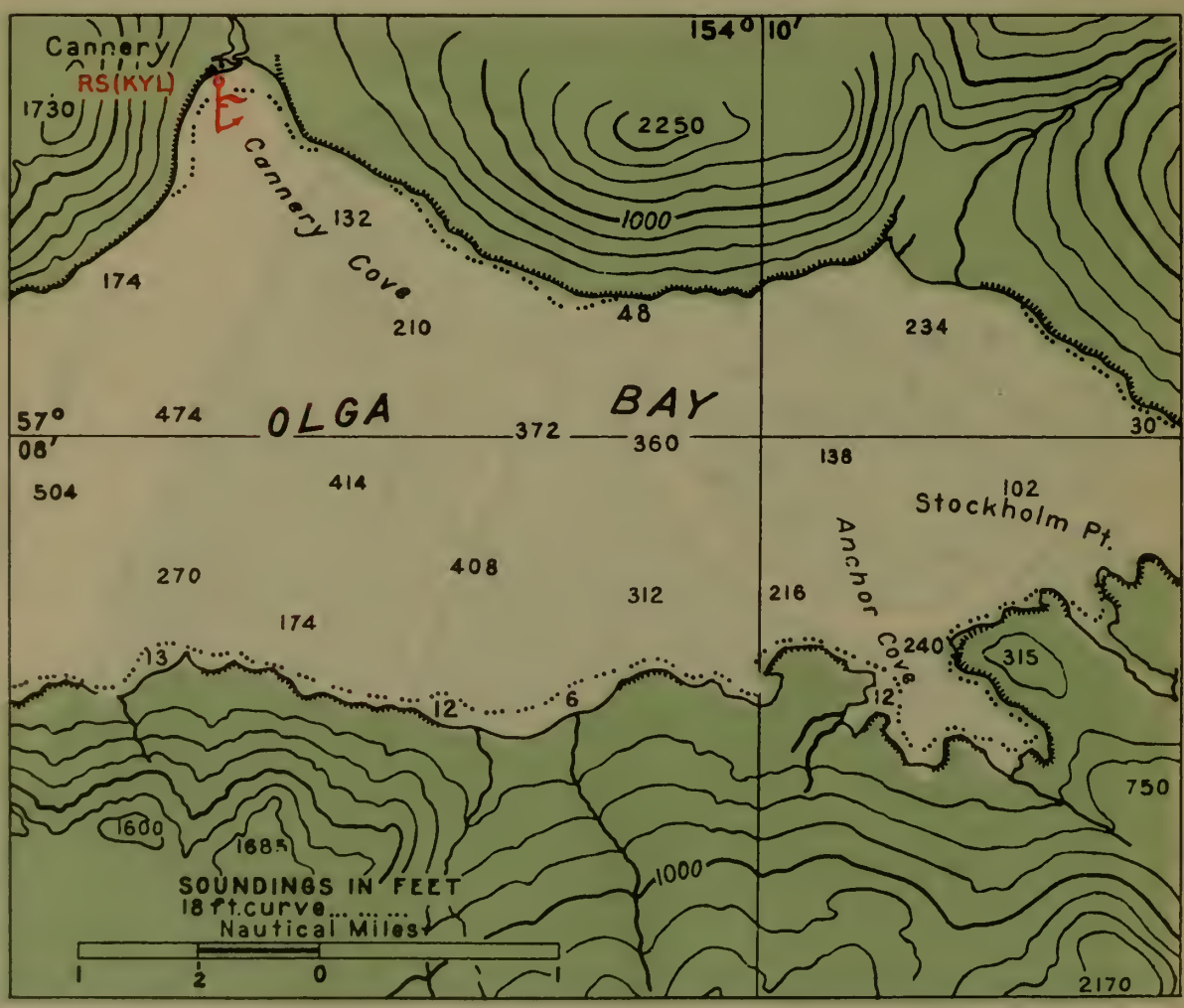
None. Ninilchik is a small native settlement at the head of a small stream.

GENERAL INFORMATION

Meteorological conditions: *Prevailing winds:* North. *Fog:* Rare.

Landmarks: Bluffs on each side of stream; schoolhouse and church painted white on high hill.


154° 05'
Cannery
RS(KYL)
OLGA BAY
KODIAK ISLAND
DEADMAN BAY
Kaiugnak B.
Portage B.
Kaguyak B.
56° 58'
C.Alitak Fl.
ALITAK BAY
Nautical Miles
5 4 3 2 1 0 5


154° 10'
Cannery
RS(KYL)
Cannery Cove
OLGA BAY
57° 08'
Stockholm Pt.
Anchor Cove
SOUNDINGS IN FEET
18 ft. curve
Nautical Miles
1 2 0 1

OLGA BAY

KODIAK ISLAND

SEAPLANE ANCHORAGE

(Lat. 57°09′ N., Long. 154°14′ W.)

DESCRIPTION

Location: Cannery Cove, north side of Olga Bay. **Depth:** 6 to 40 feet. **Tidal range:** 1 to 2 feet. **Character of bottom:** Sticky. **Currents:** Negligible. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: Olga Bay. **Area:** N./S., 1½ to 4 miles; E./W., 12 miles. **Shelter:** Good. **Obstructions:** Rocky shores; land on north and south shores rises abruptly to heights of 800 to 2,000 feet.

FACILITIES

Cannery operated by the Alaska Packers Association. Store open the year around, limited amount of supplies can be obtained. **Communications:** Radio station, call letters KYL.

GENERAL INFORMATION

Landmarks: Olga Bay has the appearance of a lake.

Tender anchorage: Anchorage can be found in several places along the shore. The best anchorage is in Anchor Cove on the south side of Olga Bay. The cannery company has dolphins here where small boats are tied up over the winter period. The dock at the cannery has depths varying from 7 to 11 feet alongside. It is possible to carry about 21 feet through the Narrows. It should not be attempted except with local knowledge.

Remarks: The country in the vicinity is treeless and except for outcropping ledges of bare rock on the knolls and peaks, the land is covered by thick moss and grass.


132° 50′
Patterson Glacier
5124
Glacier
5294
Fl.
FREDERICK SOUND
2482
2532
Nautical Miles
1 0 1 2 3 4
2929
56° 50′
2770
Fl.
2900
3100
2700
#PETERSBURG
3005
2980
2100
Wrangell Narrows
2916
3200


132° 58′
13
36
24
15
28
28
13
PETERSBURG
FLOATS
12
F.R.
19
SEPT. 1933
24
9
NARROWS
FLOATS
18
21
6
F.R.
F.G.
16
15
22
27 FEET
F
16
10
22
22
18
56° 48′
19
13
30
31
WRANGELL
33
9
Ramp
24
SOUNDINGS IN FEET
18 ft. curve
½ Nautical Mile
0
½

PETERSBURG

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 56°47′ N., Long. 132°59′ W.)

DESCRIPTION

Location: Eastern side of Wrangell Narrows adjacent to Petersburg Highway, 1.5 miles southwest of Petersburg. **Depth:** 3 to 20 feet. **Tidal range:** 13.8 feet. **Character of bottom:** Sand. **Currents:** Tidal. **Shelter:** Good. **Marking:** Roof of winch house painted red and white.

LANDING AND TAKE-OFF AREA

Location: Wrangell Narrows. **Area:** N./S., unlimited; E./W., 200 yards. **Shelter:** Good. **Obstructions:** Ledges and flats; beacons and buoys; floating logs at times.

FACILITIES

Specification fuel and oil from Petersburg; ramp 40 by 145 feet and platform 60 by 112 feet with winch for hauling out planes; several machine shops; minor repairs; marine railways. **Beach:** small, available for hauling out near the town. **Communications:** Army radio station, call letters WTQ; cable with points in Alaska and Puget Sound; regular steamship communication with Puget Sound, British Columbia, and principal ports in Alaska.

GENERAL INFORMATION

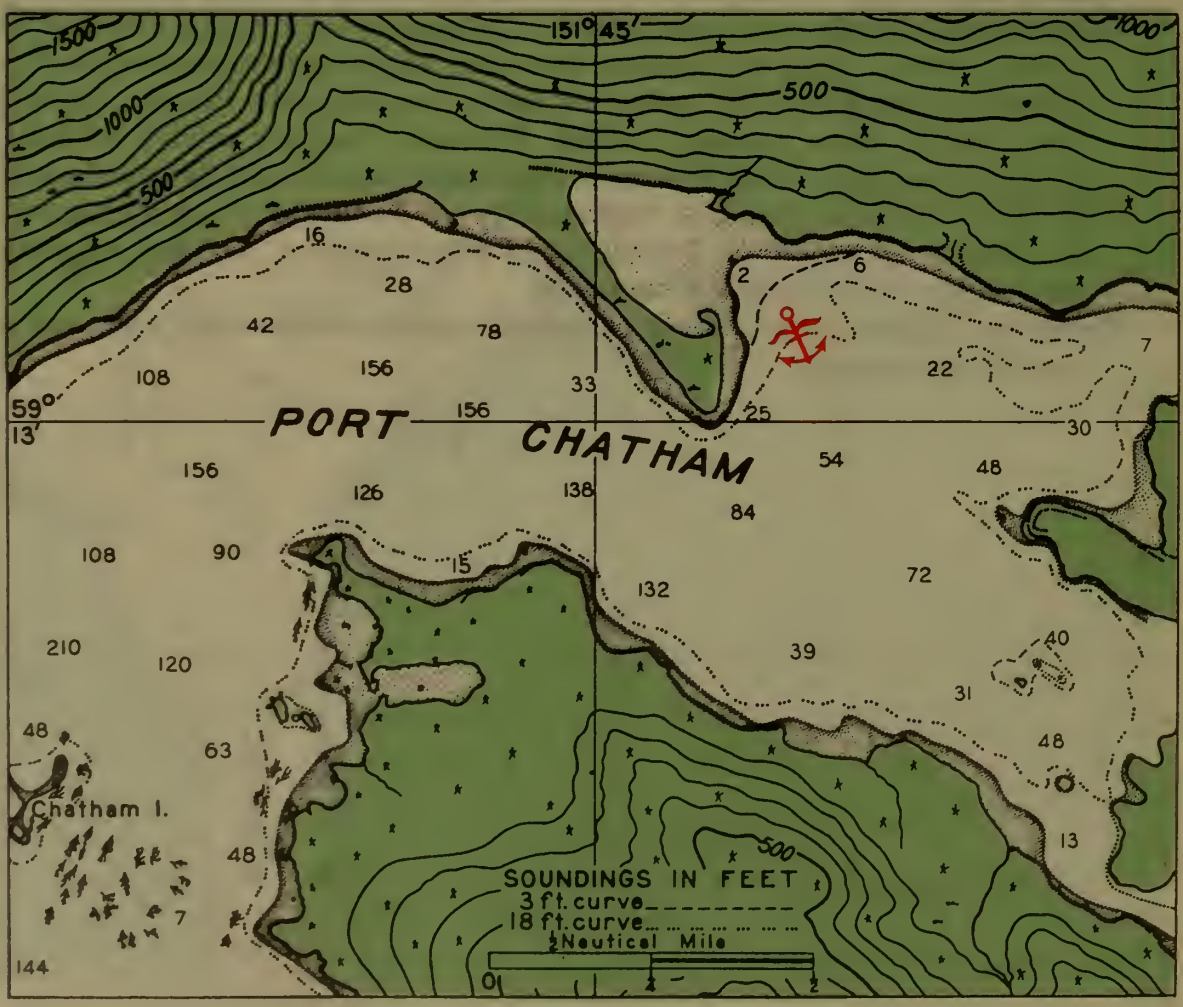
Meteorological conditions: *Prevailing winds:* Southeast.

Landmarks: Docks and village.

Tender anchorage: Wrangell Narrows has a channel 200 feet wide and 21 feet deep at mean lower low water. Channel is narrow and intricate in places, between dangerous ledges and flats, the tidal currents are strong. Marked by an extensive system of lights, beacons, and buoys. Vessels too large to make passage through Wrangell Narrows safely, continue westward through Sumner Strait, round Cape Decision, and go northward through Chatham Strait, or westward to sea by way of Cape Ommaney. Anchorage can be had off Petersburg in 4 to 6 fathoms. Several wharves with depths of 14 to 23 feet alongside.

Remarks: A seaplane anchorage is located adjacent to the town and northward of the long pier.


151° 40'
Mt. Bede
3250
2300
2400
3000
2350
2575
Mt. Mills
3200
Pt. Adam
2600
2400
Koyuktolik Bay
2506
Cone Mt.
1800
Windy Bay
1940
Mt. Rock
2000
1875
Chrome
2375
PORT CHATHAM
2525
Chugach Bay
Fl.
59° 10'
1605
1875
2250
Chugach Passage
Elizabeth I.
Cape Elizabeth
1590
E. Chugacha I.
Fl.
Pearl I.
1660
Fl.
Nautical Miles
0
5


151° 45'
1500
1000
500
1000
16
28
42
78
2
6
108
156
33
22
7
59° 13'
PORT CHATHAM
156
25
30
156
126
138
54
48
84
108
90
15
72
132
210
120
39
40
31
48
63
48
Chatham I.
48
13
7
144
500
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
½ Nautical Mile
0
1
2

PORT CHATHAM

KENAI PENINSULA—COOK INLET

SEAPLANE ANCHORAGE

(Lat. 59°13′ N., Long. 151°44′ W.)

DESCRIPTION

Location: Port Chatham east side of entrance to Cook Inlet. **Depth:** 6 to 18 feet. **Tidal range:** 12 feet. **Character of bottom:** Rocky. **Currents:** Tidal—2 knots; stronger near entrance. **Shelter:** Good; during heavy gales some williwaws are felt at the anchorage.

LANDING AND TAKE-OFF AREA

Location: Port Chatham. **Area:** N./S., 2 miles; E./W., 3 miles. **Shelter:** Good. **Obstructions:** Wooded hills on north, east, and south sides; dangers marked by kelp.

FACILITIES

None. The herring saltery is inoperative. A fisherman lives in the buildings and has a power dory. No beach suitable for hauling out. **Communications:** None.

GENERAL INFORMATION

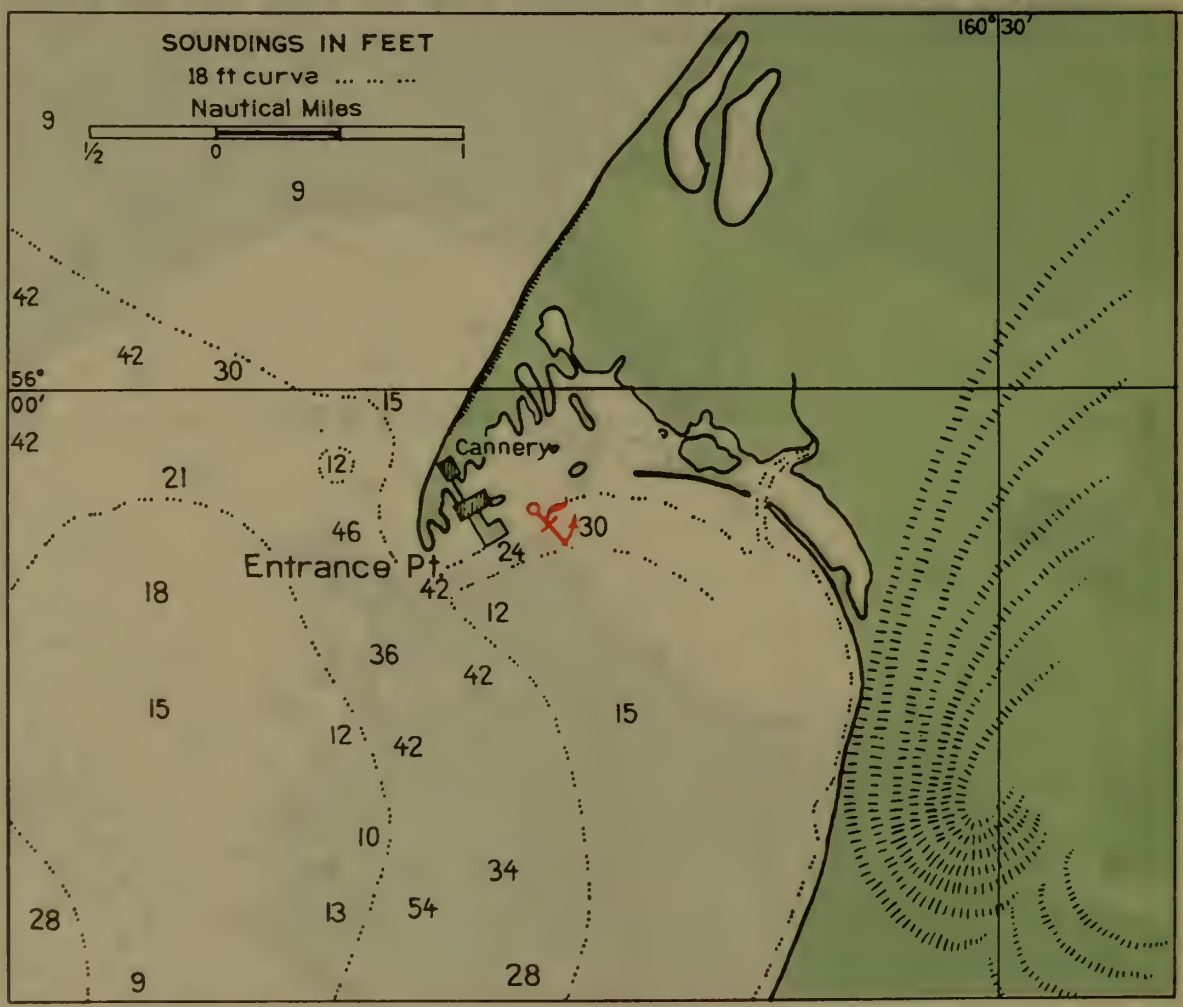
Meteorological conditions: *Prevailing winds:* Southwest in summer; northwest in winter. *Fog:* Occasional from June to October.

Landmarks: Buildings of saltery.

Tender anchorage: Anchor in the broad part of the inner harbor in 10 to 13 fathoms ¼ to ½ mile eastward of the low grassy spit on north side of entrance.

Remarks: The mountains rise abruptly from the water and are wooded about halfway to the summits.


160° 30'
Cannery
Entrance Pt.
Nautical Miles
0
5
DEER
I.
Harbor Pt.
PORT MOLLER
Pt Divide
55°
30'


SOUNDINGS IN FEET
18 ft curve ... ...
Nautical Miles
9
½
0
1
160° 30'
9
42
42
30
56°
00'
15
42
Cannery
12
21
46
30
Entrance Pt.
24
42
18
12
36
42
15
15
12
42
10
34
28
13
54
9
28

PORT MOLLER

ALASKA PENINSULA—BRISTOL BAY

SEAPLANE ANCHORAGE

(Lat. 56°59′ N., Long. 160°33′ W.)

DESCRIPTION

Location: Port Moller Bay adjacent to the cannery at Entrance Point. **Depth:** 6 to 42 feet. **Tidal range:** 7.5 feet. **Character of bottom:** Sand. **Currents:** Moderate. **Shelter:** Good. **Obstructions:** Shoals.

LANDING AND TAKE-OFF AREA

Location: Port Moller and Bristol Bay. **Area:** Unlimited. **Shelter:** None. **Obstructions:** Shoals in Port Moller.

FACILITIES

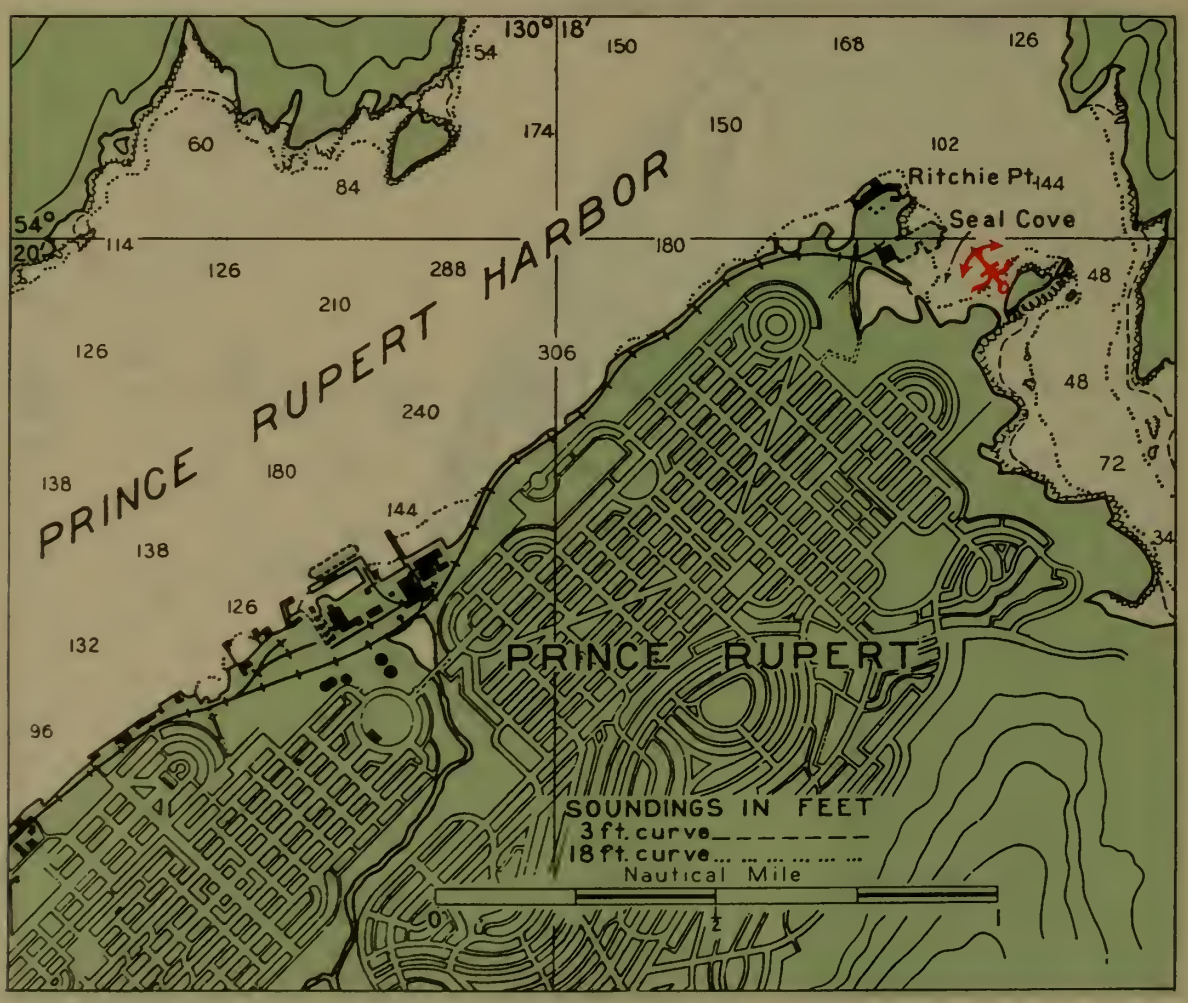
Store with limited amount of provisions. **Communications:** Cannery company operates radio station, call letters KWR, from April to August. Company steamer from Bellingham, Wash., makes regular calls at Port Moller. A trail leads overland from Port Moller to Balboa Bay on the Pacific side.

GENERAL INFORMATION

Tender anchorage: Surveys of Port Moller are incomplete. Cannery will furnish pilot on request. Convenient anchorage can be had in channel abreast dolphin in 13 fathoms. A more protected anchorage may be found in channel between Entrance Point and Harbor Point. Wharf has a depth of 18 feet along side.

Remarks: Port Moller is surrounded by high mountains. The shore is steep and rocky except at the spits.


Nautical Miles
1 0 1 2 3
130° 15'
3070
1480
METLAKATLA
CHATHAM SOUND
Tugwell I.
Occ.
Prince Rupert Hbr.
Prince Rupert 2 f.R.
Occ.
PRINCE RUPERT
Fern Passage
DIGBY ISLAND
2322
KAIEN ISLAND
1600
Occ R
54° 15'
2116
Occ R
1700


130° 18'
54° 20'
PRINCE RUPERT HARBOR
Ritchie Pt.
Seal Cove
PRINCE RUPERT
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Mile
0
1

PRINCE RUPERT

BRITISH COLUMBIA

SEAPLANE ANCHORAGE

(Lat. 54°20′ N., Long. 130°17′ W.)

DESCRIPTION

Location: Seal Cove, north end of Kaien Island, adjacent to the town site of Prince Rupert. **Depth:** 9 to 18 feet. **Tidal range:** 21 feet. **Character of bottom:** Mud. **Currents:** Negligible. **Shelter:** Good. **Obstructions:** High-tension cable 80 feet high crosses Fern Passage; log boom traffic is sometimes being carried on; caution is necessary when using this anchorage.

LANDING AND TAKE-OFF AREA

Location: Prince Rupert Harbor. **Area:** NE./SW., 4 miles by ½ to 1 mile. **Shelter:** Good. **Obstructions:** None.

FACILITIES

Specification fuel and oil; all harbor facilities; repairs. **Communications:** Radio station on Digby Island, call letters, VAJ. Frequent communication via steamer, railroad, and telegraph.

GENERAL INFORMATION

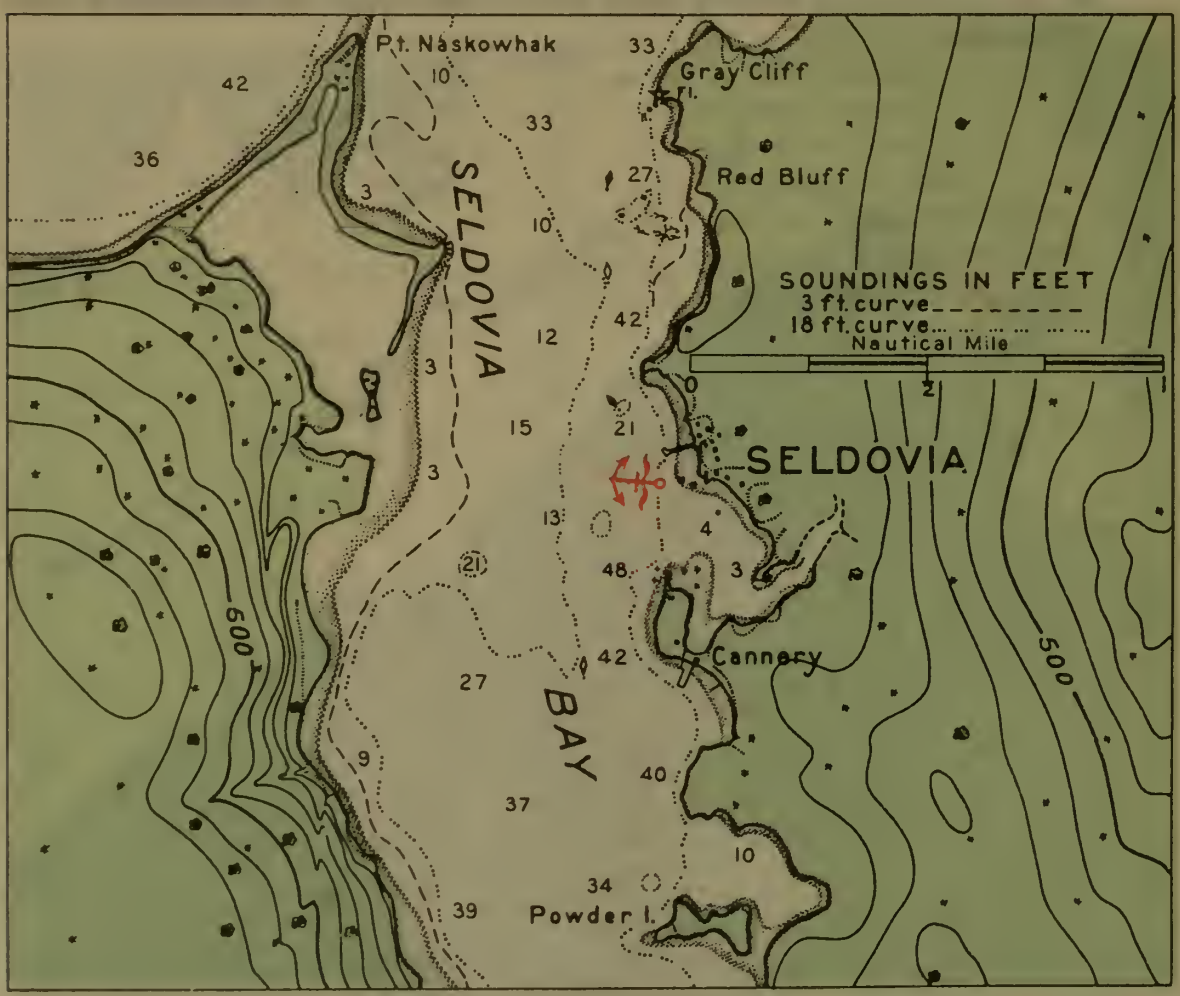
Meteorological table: See page 37.

Landmark: Chimney on cannery on Ritchie Point.

Tender anchorage: Anchorage can be had in Fern Passage in depths of 9 to 25 fathoms.

Remarks: Seal Cove is unsuited for refueling. Planes have been refueled at the Government wharf in main harbor; there the tidal range made some difficulties.


Nautical Miles
0
5
151° 40'
COOK
INLET
Nubble Pt.
Barbara Pt.
Kasitsna Bay
Seldovia Pt.
Fl.
Pt. Naskowhak
Seldovia
SELDOVIA BAY
Pt. Pogibshi
Pt. Opasni
Indian Vil.
PORT GRAHAM
Alexandrovsk
Port Graham
59° 20'
Fl.
Flat I.
Pt. Bede
Mt. Bede
3230
1660
2300
2575
2350
2750
2950
2400
3000
2800
2600
3400
3200
1750
1560
1560


Pt. Naskowhak
Gray Cliff
Fl.
Red Bluff
SELDOVIA BAY
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Mile
SELDOVIA
Cannery
Powder I.
500
500
42
36
33
27
10
3
12
15
21
13
4
48
3
42
27
9
40
37
10
34
39

SELDOVIA BAY

KENAI PENINSULA—COOK INLET

SEAPLANE ANCHORAGE

(Lat. 59°26′ N., Long. 151°43′ W.)

DESCRIPTION

Location: Eastern side of Seldovia Bay adjacent to the pier at Seldovia. **Depth:** 11 to 30 feet. **Tidal range:** 15.4 feet. **Character of bottom:** Mud. **Currents:** 1 to 2 knots. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: Seldovia Bay. **Area:** N./S., 3 miles; E./W., 1,000 to 1,500 yards. **Shelter:** Good. **Obstructions:** High hills surround bay; shoals and rocks, which are indicated by kelp at low water in the spring, summer, and fall.

FACILITIES

Standard Oil Co. maintains a tank station. Small marine railway; minor repairs. **Beach,** suitable for hauling out adjacent to the village. **Communications:** Radio station, call letters, KEA. Mail boat from Seward makes regular calls.

GENERAL INFORMATION

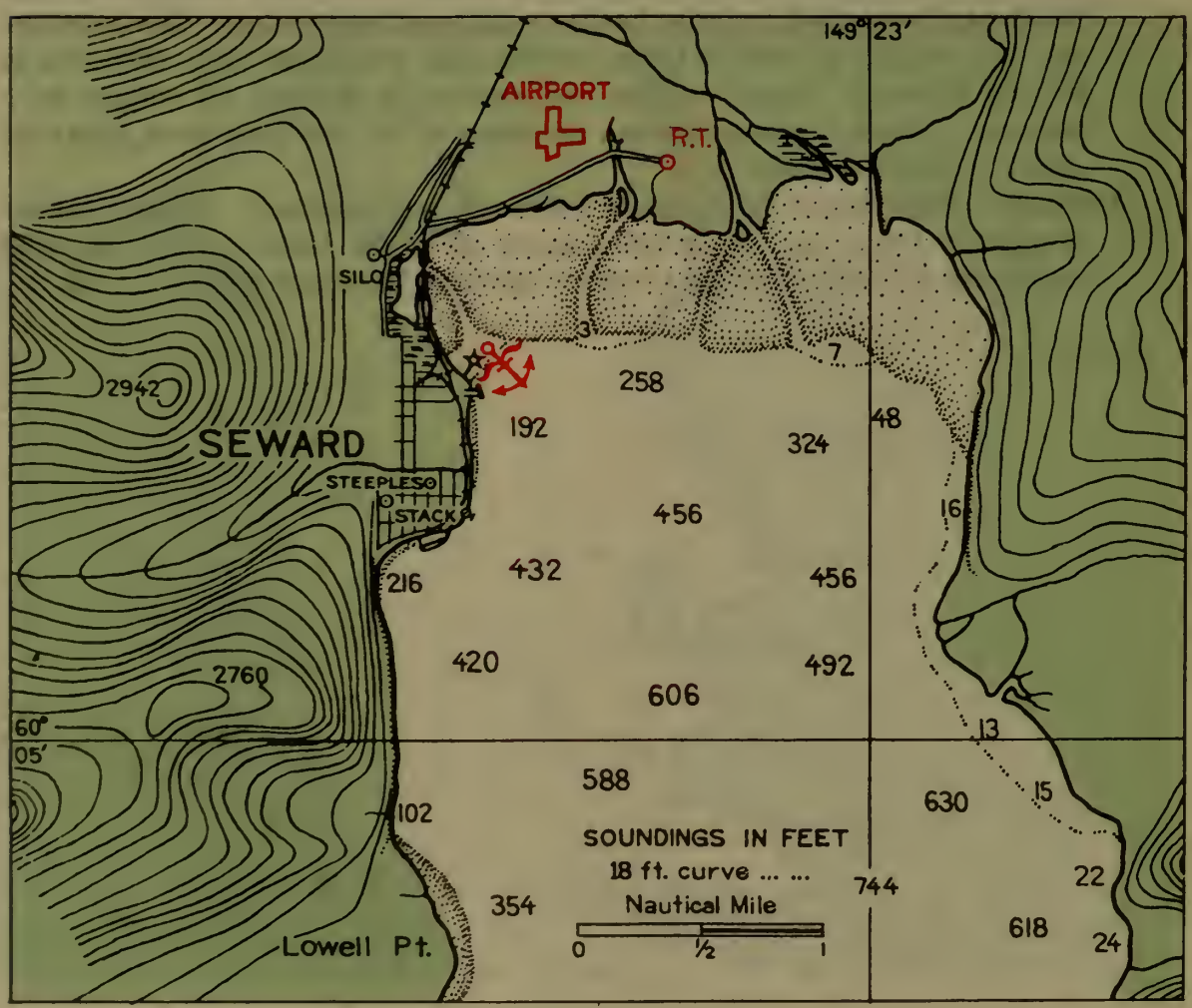
Meteorological table: See page 38.

Landmarks: Red Bluff, east side of Seldovia Bay, one half mile north of the village.

Tender anchorage: Channel is between shoals, several rocks, and kelp patches near eastern shore, varies in width from 150 to 400 yards. Channel has least depth of 2½ fathoms at mean lower low water; a deeper depth can be carried to inner harbor with local knowledge. Best anchorage is in middle of harbor three fourths mile southwest from Seldovia in 9 to 10 fathoms. Small vessels can anchor in channel off village in 5 fathoms. Dock at Seldovia has frontage of 92 feet and least depth of about 16 feet alongside.

Remarks: Reported to be a secure harbor in any weather. Large number of salmon traps line the eastern shore of Cook Inlet. They are pile structures and are required to carry lights at the outer end.


149° 35'
SEWARD AIRPORT
RS(WXR)
SEWARD
4037'
4620'
4430'
4000'
U.S. Naval Reservation
3020'
2250'
3318'
3680'
3380'
4300'
880'
Thumb C.
RESURRECTION BAY
RESURRECTION PENINSULA
2800'
2860'
2100'
Nautical Miles
1 0 1 2 3 4
60° 00'
4380'
4840'
Skee Glacier
Bear Glacier
Aialik Glacier
Aialik Bay
3612'
3697'
4725'
2968'
3030'
2650'
680'
Fl.
1515'
RENARD I.
1558'
1291'
1341'


149° 23'
AIRPORT
R.T.
SILO
SEWARD
STEEPLES
STACK
2942
2760
258
192
324
48
456
16
432
216
456
420
492
606
13
588
630
15
102
744
22
354
618
24
60° 05'
Lowell Pt.
SOUNDINGS IN FEET
18 ft. curve ... ...
Nautical Mile
0 ½ 1

SEWARD

KENAI PENINSULA

SEAPLANE ANCHORAGE

(Lat. 60°06′ N., Long. 149°26′ W.)

DESCRIPTION

Location: Resurrection Bay, adjacent to the northeastern part of Seward, inside breakwater. **Depth:** 3 to 10 feet. **Tidal range:** 8.3 feet. **Character of bottom:** Sand and mud. **Currents:** Negligible. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: Resurrection Bay. **Area:** N./S., unlimited; E./W., 1.5 to 2.5 miles. **Shelter:** Good; bay is subject to heavy williwaws. **Obstructions:** Mountains rise sharply on east and west sides; shoals at head of bay; considerable sea makes into the bay with southerly winds.

FACILITIES

Small stock of specification fuel and oil; ordinary port facilities, including railroad crane; small machine shop; landing float at railroad wharf. Small boat available. Good beach. **Communications:** Army radio station, call letters, WXR; cable with other Alaskan ports and Seattle; telegraph via the railroad to Fairbanks; port of call for the regular coasting vessels from Seattle; has good service year round. Southern terminus of the Alaskan Railroad.

GENERAL INFORMATION

Meteorological table: See page 39.

Landmarks: Radio towers. Bear Glacier on the west shore has a dirty appearance.

Tender anchorage: Due to great depths there are no convenient anchorages off Seward. Vessels can anchor off the docks in 25 to 31 fathoms. Several wharves with depths of 27 to 42 feet alongside. Exposed to southeast winds, with northeast winds vessels are apt to drag off into deep water on account of the steep beach of the bottom. Thumb Cove on the eastern shore 7 miles southeast of Seward affords anchorage ⅜ to ½ mile from its head in 25 to 30 fathoms.

Remarks: The shores and islands of Resurrection Bay are steep and high, with precipitous slopes in places. The valleys are wooded up to an elevation of about 1,000 feet. With fresh to strong south winds and on account of the great depths, there is no safe anchorage except in the restricted space behind the breakwater. Large harbor open to the southwest. Ample mooring and take-off area but would be undesirable in heavy weather.


149° 35'
4037'
SEWARD AIRPORT
4620'
SEWARD
4430'
4000'
U.S. Naval Reservation
3020'
2250'
Nautical Miles
1 0 1 2 3 4
3318'
3680'
3380'
4300'
1880'
Thumb C.
RESURRECTION BAY
RESURRECTION PENINSULA
60° 00'
4380'
4840'
Skee Glacier
Bear Glacier
Aialik Glacier
Aialik Bay
3612'
3697'
4725'
2968'
3030'
2650'
580'
Fl.
1515'
RENARD I.
1291'
1341'
2800'
2860'
2100'


Slashed
200'
1800'
800'
Cleared Only
SEWARD 1½ M.

SEWARD

KENAI PENINSULA

SEWARD AIRPORT

(Lat. 60°07′ N., Long. 149°26′ W.)

DESCRIPTION

Location: Government landing field 1 mile north of Seward, ¼ mile eastward of the Alaska Railroad. **Altitude:** 5 feet. **Dimensions:** Landing strips, N./S., 1,800 by 200 feet; E./W., 800 by 200 feet. **Surface:** Good. **Marking:** Wind cone. **Lighting:** None. **Obstructions:** Two radio towers ¾ mile east.

FACILITIES

Small stock of specification fuel and oil at Seward; minor repairs; hangar 50 by 60 by 35 feet.

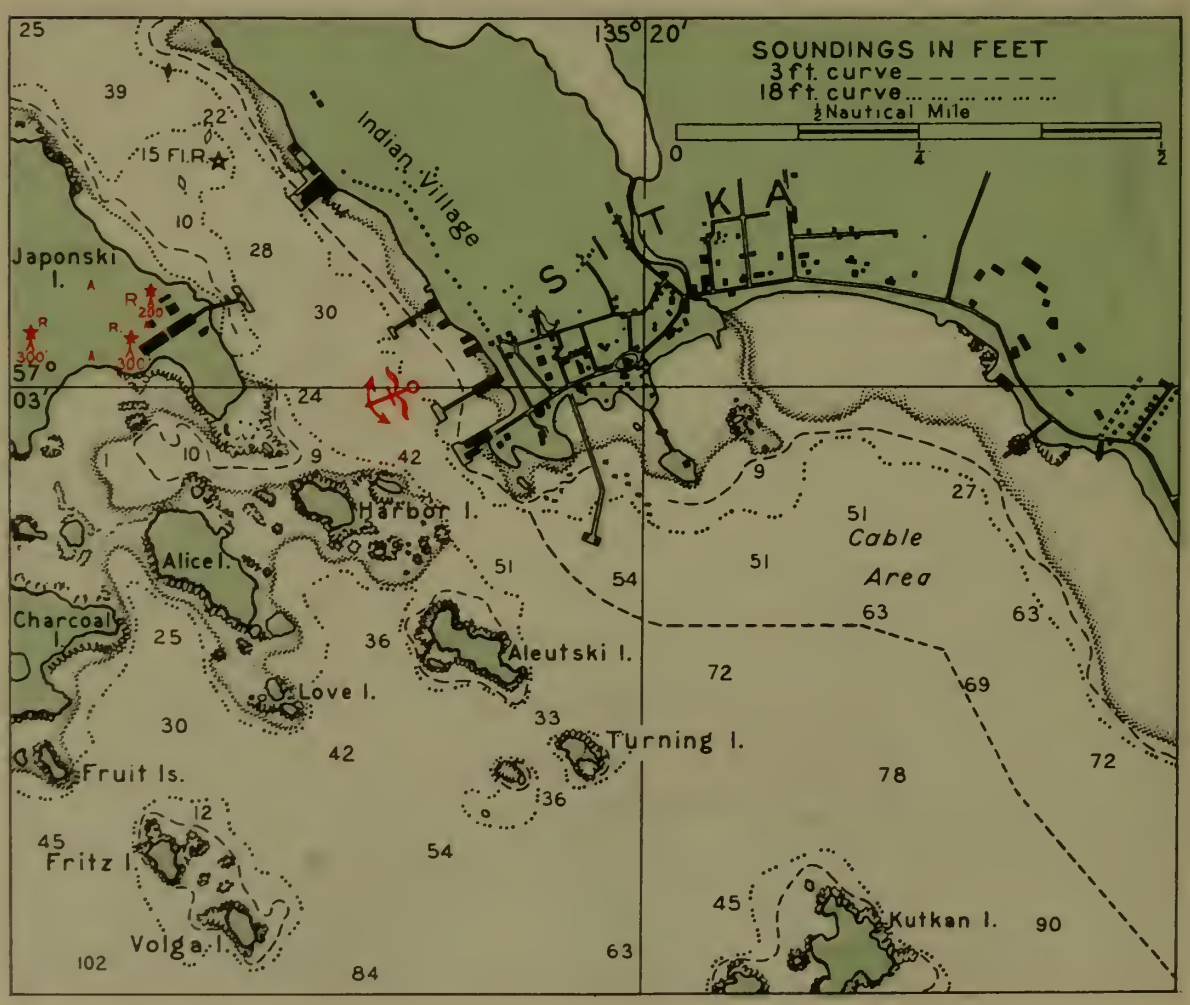
Communications: Transportation to city via automobile.

GENERAL INFORMATION

Meteorological table: See page 39.

Landmarks: Radio towers.


KRUZOF I.
BARANOF I.
SITKA SOUND
SITKA
Middle I.
Hallbut Pt.
Shoals Pt.
C. Burunof
Mt. Edgecumbe
3271
Nautical Miles
0
5
57° 05'
135° 30'
1600
1800
2800
3000
3200
2300
2400
2600
3216
2413
Fl.
Fl.R.
RS(W)(C)


SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
½ Nautical Mile
0
¼
½
135° 20'
57° 03'
Indian Village
SITKA
Japonski I.
Harbor I.
Alice I.
Charcoal I.
Love I.
Aleutski I.
Turning I.
Fruit Is.
Fritz I.
Volga I.
Cable Area
Kutkan I.
15 Fl.R.
Fl.R.
25
39
22
10
28
30
24
1
9
42
51
54
36
33
72
69
63
27
78
12
45
102
84
90

SITKA

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 57°03′ N., Long. 135°20′ W.)

DESCRIPTION

Location: Sitka Harbor adjacent to and west of Sitka. **Depth:** 6 to 30 feet. **Tidal range:** 7.7 feet. **Character of bottom:** Mud. **Currents:** 2 knots. **Shelter:** Good; without adequate moorings planes may drag in strong winds.

LANDING AND TAKE-OFF AREA

Location: Sitka Harbor. **Area:** Ample. **Shelter:** Good. **Obstructions:** 300-foot radio towers on Japonski Island; numerous islands; channel buoys.

FACILITIES

Specification fuel and oil; minor repairs; general stores. **Communications:** Army radio station, call letters, WXC; cable with points in Alaska and Puget Sound; regular steamship communication with Puget Sound, British Columbia, and principal ports in Alaska.

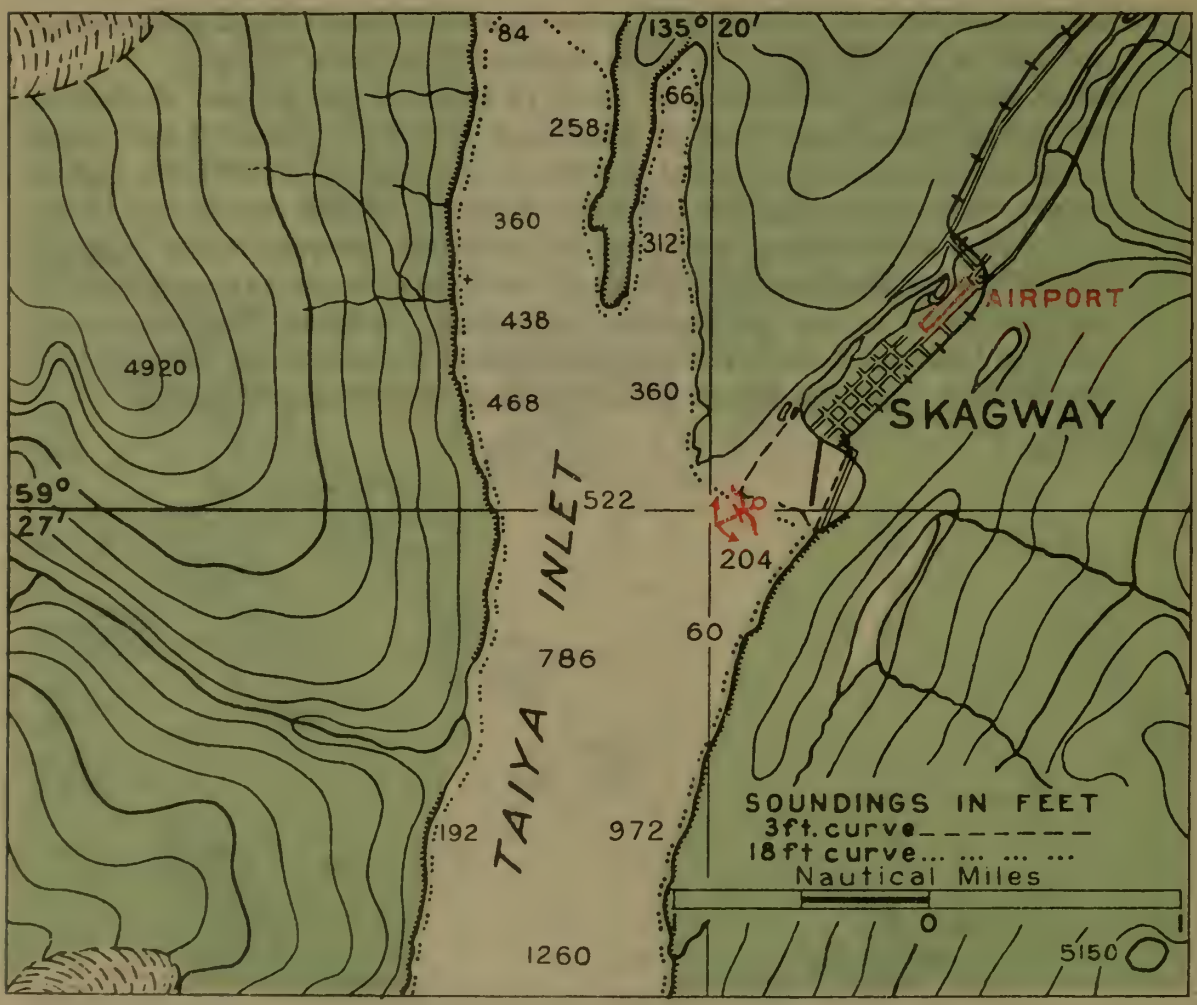
GENERAL INFORMATION

Meteorological table: See page 40.

Landmarks: Mount Edgecumbe, (3,271 feet) on Kruzof Island is the prominent landmark for Sitka Sound. It is easily distinguished by its isolated position, its flat top, its peculiar streaked appearance, and its reddish color. The upper part is a bare volcanic cone, usually snow clad. Radio towers on Japonski Island. Fixed red obstruction lights are shown on the two 300-foot radio towers of the decommissioned naval radio station and one on the 200-foot steel mast located on Japonski Island.

Tender anchorage: Anchorage in 12 to 14 fathoms can be had at Eastern Anchorage, ¼ to ½ mile east of wharf and 250 to 300 yards off the islands on south side; directly abreast of Middle Channel the swell from outside renders anchorage uneasy in southerly weather. Small vessels can anchor at the Middle Anchorage westward of the wharf, between it and Japonski Island; the holding ground is not good, the tidal currents have considerable velocity; with strong wind vessel may drag. Western Anchorage eastward of Channel Rock is not very convenient because of its distance from the landing. Several wharfs with depths of 18 to 36 feet alongside.


135° 24'
5500
5600
SKAGWAY AIRPORT
RS(WZC)
SKAGWAY
mountain loop
4900
6500
59° 25'
5000
5160
Nautical Miles
1 0 1 2 3
5700
TAIYA INLET
gravel slide
5150
4500
4800
Chilkoot
6200
4060
5300
4400
5560
4607
4100
5515
3920
Tanani Pt.
5100
3540
Fl.


84
135° 20'
66
258
360
312
AIRPORT
438
4920
468
360
SKAGWAY
59° 27'
522
204
60
TAIYA INLET
786
SOUNDINGS IN FEET
3ft. curve
18ft curve
Nautical Miles
192
972
0
1
1260
5150

SKAGWAY

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 59°27′ N., Long. 135°19′ W.)

DESCRIPTION

Location: Taiya Inlet, southwest of and adjacent to Skagway. **Depth:** 3 to 30 feet. **Tidal range:** 14 feet. **Character of bottom:** Sand and gravel. **Currents:** Tidal, weak. **Shelter:** Fair.

LANDING AND TAKE-OFF AREA

Location: Taiya Inlet. **Area:** N./S., unlimited; E./W., 1 mile. **Shelter:** Fair. **Obstructions:** Flats along front of town.

FACILITIES

Specification fuel and oil at dock or via small boats; minor repairs; float. **Beach,** suitable for hauling out. **Communications:** Army radio station, call letters WZC; cable; regular steamship communication with Puget Sound, British Columbia and the principal ports in Alaska. Skagway is the terminus of the White Pass & Yukon Railroad.

GENERAL INFORMATION

Meteorological table: See page 41.

Tender anchorage: Anchorage is near eastern side about 300 yards from the wharf in 30 to 35 fathoms. With northerly gales, a vessel is liable to drag anchor, owing to steep pitch of bottom. Railroad wharf extends across the flats to the eastern shore then along foot of bluffs with deep water along its face. Depths range from 36 feet at outer end to 32 feet in middle, to 18 feet at inner end.

Remarks: Skagway is a town and post office in the valley of the Skagway River, at the head of a small bight on the east side of Taiya Inlet. Port of entry for customs purposes.


135° 24'
59° 25'
5500
5600
SKAGWAY AIRPORT
RS(WZC)
SKAGWAY
mountain gap
4900
6500
5000
5160
Nautical Miles
1 0 1 2 3
5700
TAIYA INLET
gravel slide
5150
4500
4800
Chilkoot L.
6200
4060
5300
4400
5560
4607
4100
5515
3920
Tanani Pt.
5100
3540
Fl.


40'
30'
310'
Y
A
W
G
A
K
S
SKAGWAY R.
1960'

SKAGWAY

SOUTHEAST ALASKA

SKAGWAY AIRPORT

(Lat. 59°27′ N., Long. 135°18′ W.)

DESCRIPTION

Location: Government field located at northern edge of the town. **Altitude:** 48 feet. **Dimensions:** Size, NE./SW., 1,960 by 310 feet. **Surface:** Level grass. **Drainage:** Natural. **Marking:** Wind cone center of east boundary. **Lighting:** None. **Obstructions:** Trees and power line to northeast.

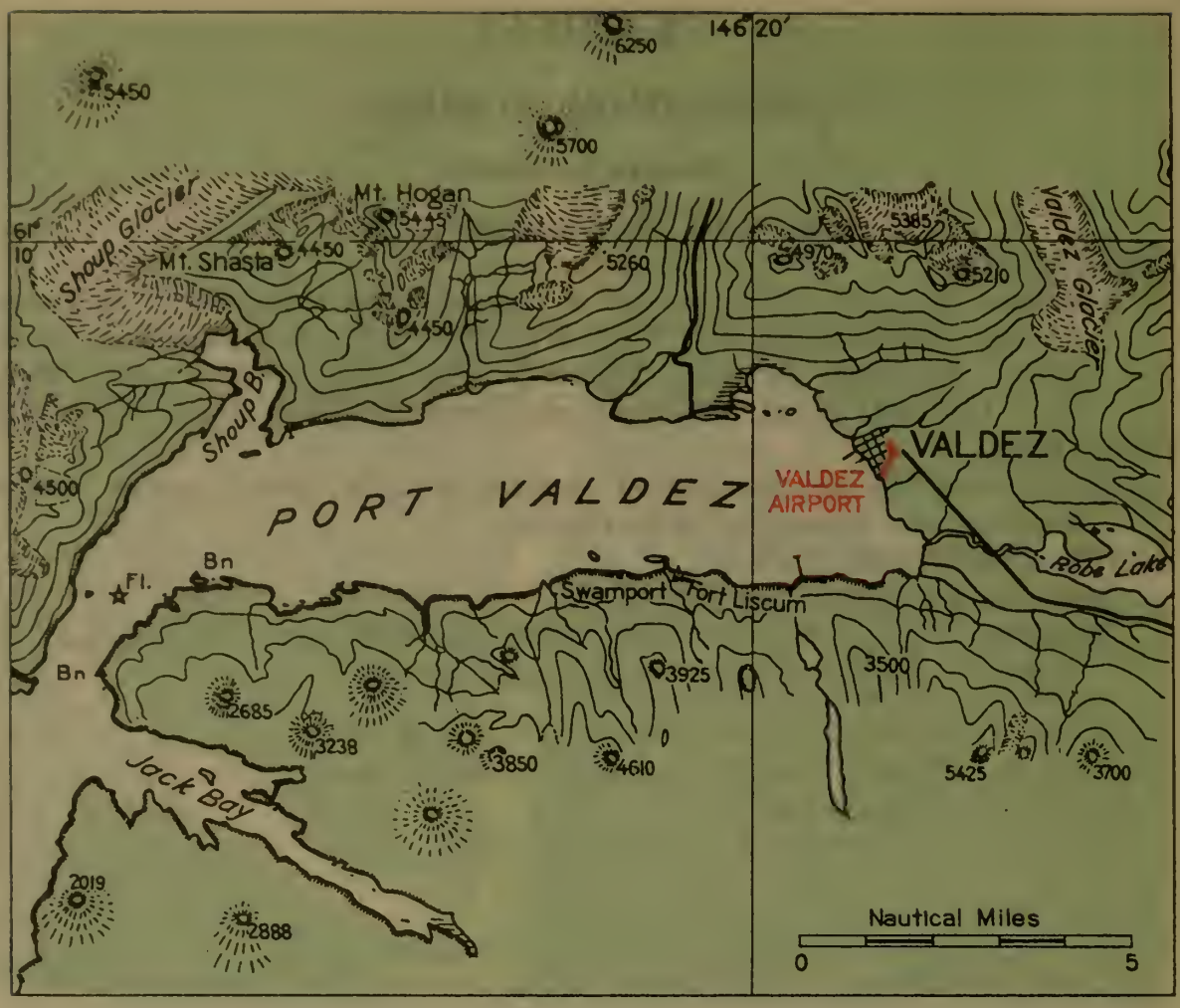
FACILITIES

Specification fuel and oil from oil company in town; minor repairs. **Communications:** Telegraph; radio station.

GENERAL INFORMATION

Meteorological table: See page 41.

Remarks: Field is plainly visible, being the only large surfaced field in vicinity. Airport of entry for customs purposes.


146°20'
6250
5450
5700
Mt. Hogan
5445
Shoup Glacier
Mt. Shasta
4450
5260
5385
4970
5210
Valdez Glacier
4450
Shoup B.
4500
PORT VALDEZ
VALDEZ
VALDEZ AIRPORT
Robe Lake
Fl.
Bn
Swamport
Fort Liscum
Bn
3925
3500
2685
3238
3850
4610
5425
3700
Jack Bay
2019
2888
Nautical Miles
0
5


Dike
1390'
200'
V A L D E Z
PORT VALDEZ
300'
2750'
Dike

VALDEZ

PRINCE WILLIAM SOUND

VALDEZ AIRPORT

(Lat. 61°07′ N., Long. 146°16′ W.)

DESCRIPTION

Location: Municipal field located at southeast edge of town. **Dimensions:** Size, NE./SW., 2,750 by 300 feet; NW./SE., 1,390 by 200 feet. **Surface:** Gravel. **Drainage:** Natural. **Marking:** Wind cone on hangar; red and white corner markers. **Lighting:** None. **Obstructions:** Dike to north and east.

FACILITIES

Specification fuel and oil; minor repairs at garage; hangars, municipal 40 by 50 by 14 feet; private 30 by 50 by 12 feet. **Communications:** Radio station, call letters, WXJ; telephone and telegraph.

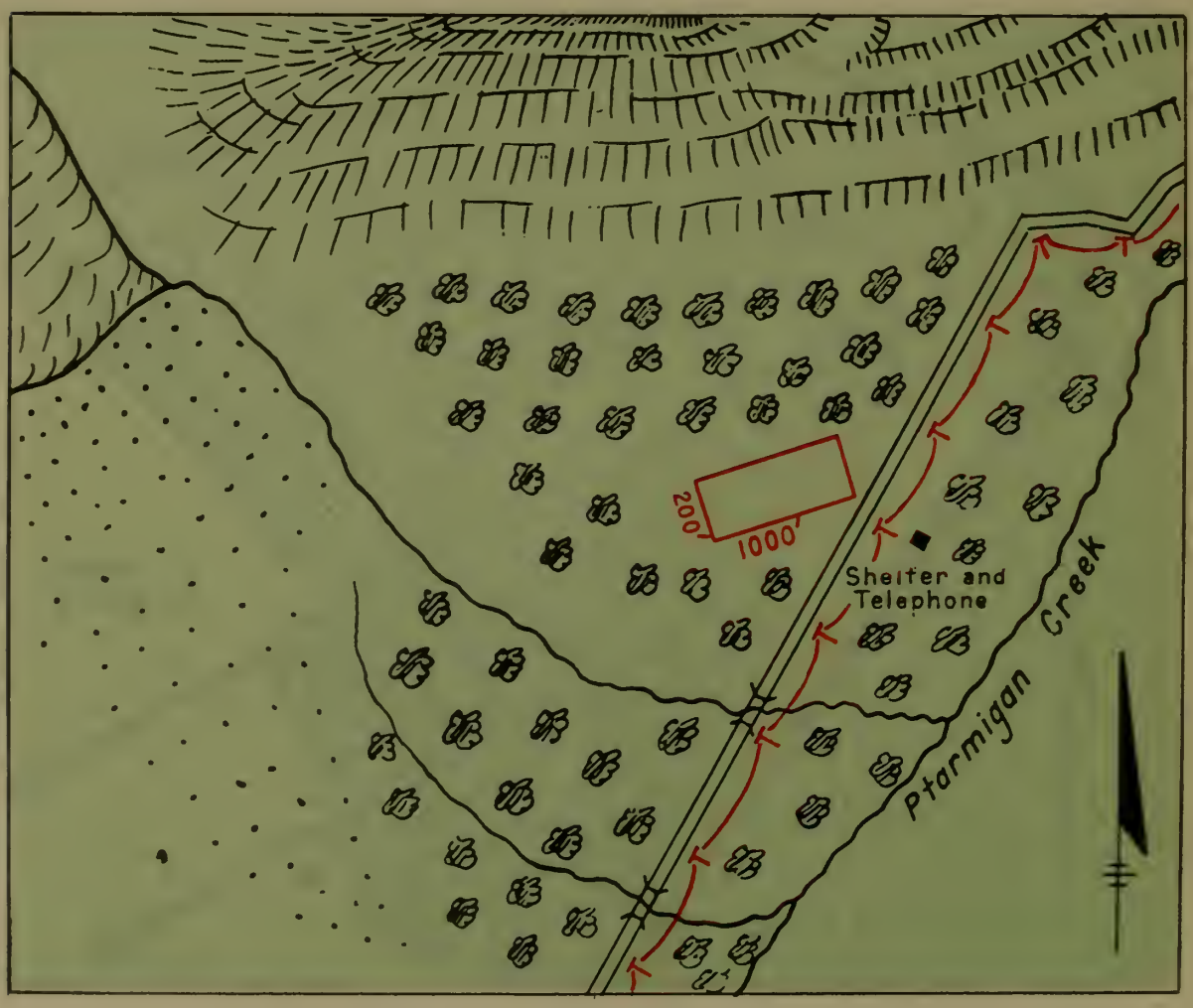
GENERAL INFORMATION

Meteorological table: See page 42.

Landmarks: Valdez Glacier, 3 miles northeast of Valdez.

Remarks: Floating seaplane ramp and platform reached from the town of Valdez by a small boat.


146° 00'
61° 07'
VALDEZ
Airport
Port Valdez
Robe L.
Valdez Glacier
8235
4978
3210
3425
Telephone
Emergency Field
Worthington Gl.
Tel.
Thompson Pass
Nautical Miles
1 0 1 2 3 4 5


200
1000
Shelter and Telephone
Ptarmigan Creek

VALDEZ

PRINCE WILLIAM SOUND

THOMPSON PASS, EMERGENCY FIELD

(Lat. 61°10′ N., Long. 145°43′ W.)

DESCRIPTION

Location: Emergency field located 18 miles east-northeast from Valdez. **Altitude above sea level:** 1,975 feet. **Dimensions:** Size, NW./SE., 1,000 by 200 feet. **Surface:** Gravel. **Drainage:** Natural. **Marking:** Red and white corner markers. **Lighting:** None. **Obstructions:** Clear approach.

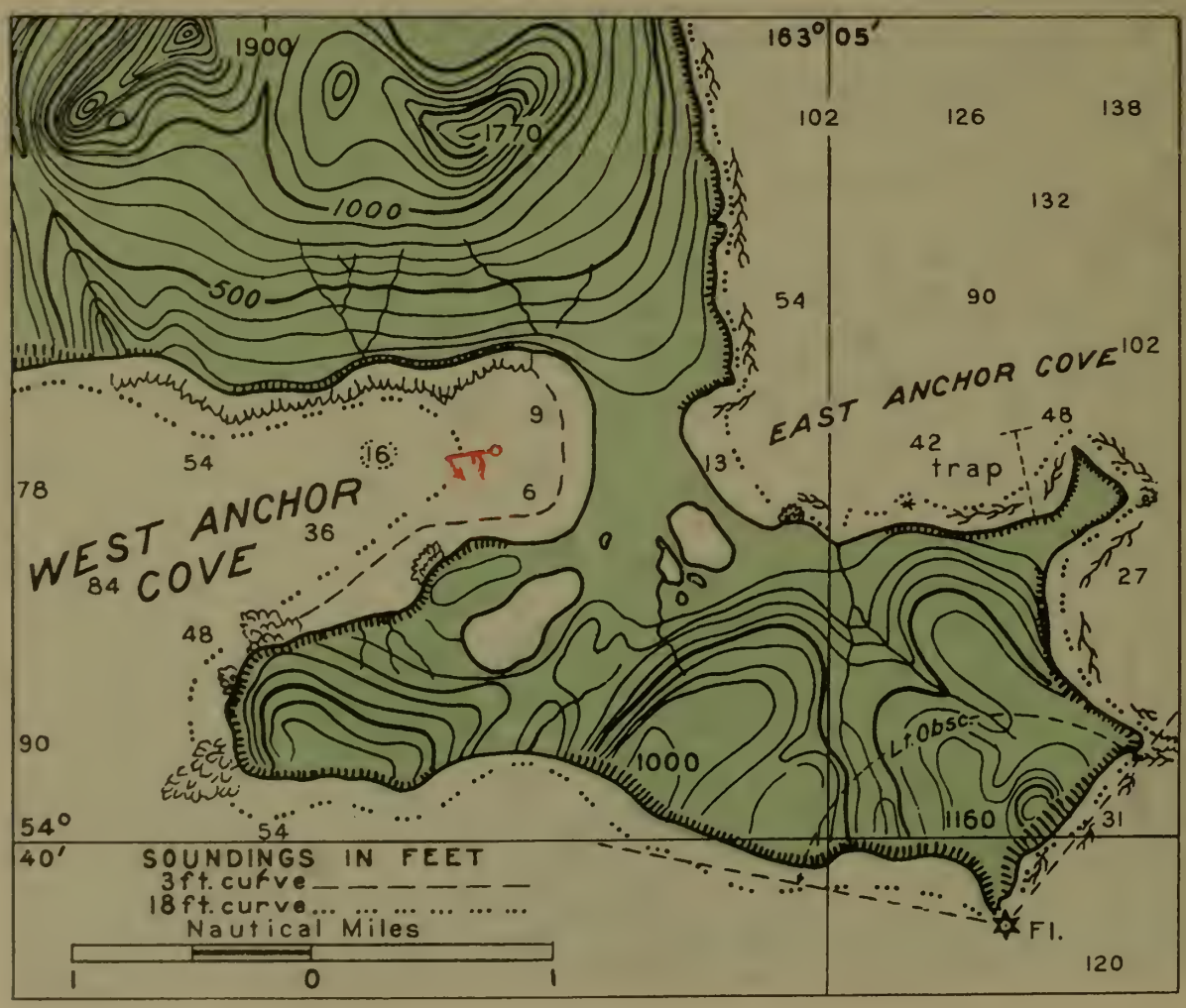
GENERAL INFORMATION

None. One shelter cabin at field with telephone and stove.

FACILITIES

Meteorological conditions: *Heaviest winds:* North from October to April. *Fog:* During months of May, June, August, and September.


1550
1950
1230
2020
Whirl Pt.
Fl
Nautical Miles
0
5
IKATAN BAY
Ikatan Pt.
Stack
54°
45′
1900
IKATAN PEN.
1700
1800
OTTER
COVE
Bird I.
1650
E Anchor Cove
W Anchor Cove
1160
C. Pankof
Fl
Cape Aksit
163° 15′


1900
163° 05′
1770
102
126
138
1000
132
500
54
90
EAST ANCHOR COVE
102
9
48
42
trap
54
16
13
78
6
WEST ANCHOR
36
84 COVE
27
48
90
Lt. Obsc.
1000
54°
54
1160
31
40′
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Miles
1
0
1
Fl.
120

WEST ANCHOR COVE

UNIMAK ISLAND—FOX ISLANDS

SEAPLANE ANCHORAGE

(Lat. 54°41′ N., Long. 163°10′ W.)

DESCRIPTION

Location: West Anchor Cove on Ikatan Peninsula, the southeastern extremity of Unimak Island. **Depth:** 6 to 36 feet. **Tidal range:** 4.5 feet. **Character of bottom:** Sand. **Currents:** Negligible. **Shelter:** Good, exposed to southerly weather. **Obstructions:** Rocky ledges extend from north and south shores.

LANDING AND TAKE-OFF AREA

Location: West Anchor Cove. **Area:** N./S., ½ to 1 mile; E./W., 3 miles. **Shelter:** Good. **Obstructions:** None.

FACILITIES

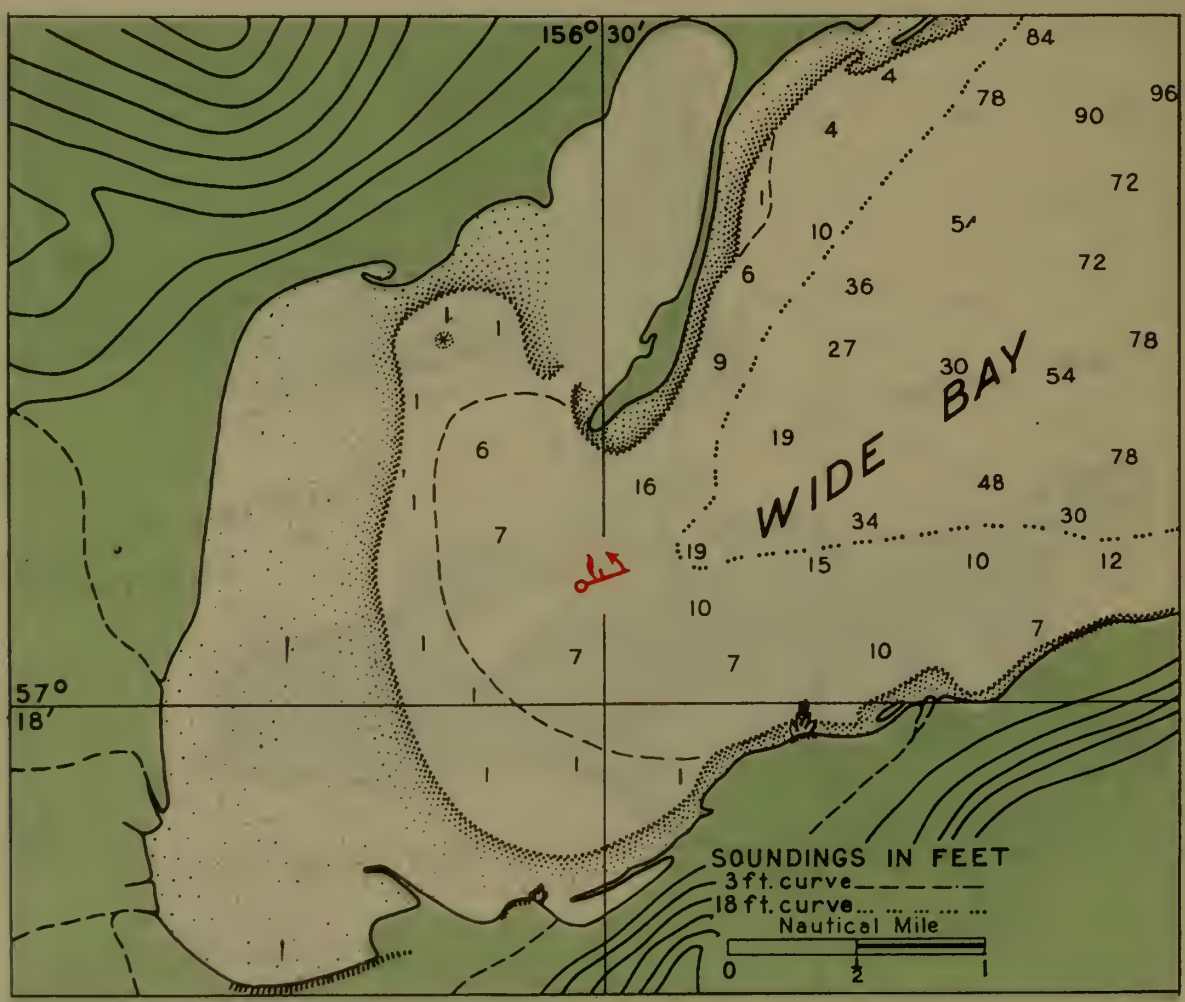
None.

GENERAL INFORMATION

Tender anchorage: West Anchor Cove is a safe and commodious anchorage for any type vessel, easy of access and departure at any time. Anchorage may be had at convenience, with good holding ground in depths from 6 to 14 fathoms.

Remarks: West Anchor Cove is exposed to southerly weather, but with East Anchor Cove on other side of Cape Pankof, safe and sheltered anchorage from ordinary weather can be found in one or the other.


156° 15'
2775
2600
1800
2050
57° 25'
2130
E. Channel I.
Channel Rk.
W. Channel I.
Terrace I.
Hartman I.
BAY
WIDE
2580
Titcliff I.
2150
2190
Nautical Miles
1 0 1 2 3


156° 30'
84
78
90
96
72
54
36
27
30
BAY
WIDE
48
34
15
10
12
57° 18'
SOUNDINGS IN FEET
3 ft. curve
18 ft. curve
Nautical Mile
0 1/2 1

WIDE BAY

ALASKA PENINSULA—SHELIKOF STRAIT

SEAPLANE ANCHORAGE

(Lat. 57°18′ N., Long. 156°30′ W.)

DESCRIPTION

Location: Head of Wide Bay about 90 miles northeast of Chignik Bay. **Depth:** 3 to 30 feet. **Tidal range:** 9.8 feet. **Character of bottom:** Soft sand. **Currents:** Negligible. **Shelter:** Good; bay is subject to williwaws with westerly winds. **Obstructions:** Shoals and reefs close to shore.

LANDING AND TAKE-OFF AREA

Location: Wide Bay. **Area:** NE./SW., 10 miles by 1½ to 3 miles. **Shelter:** Good. **Obstructions:** None.

FACILITIES

None. No settlements in the bay.

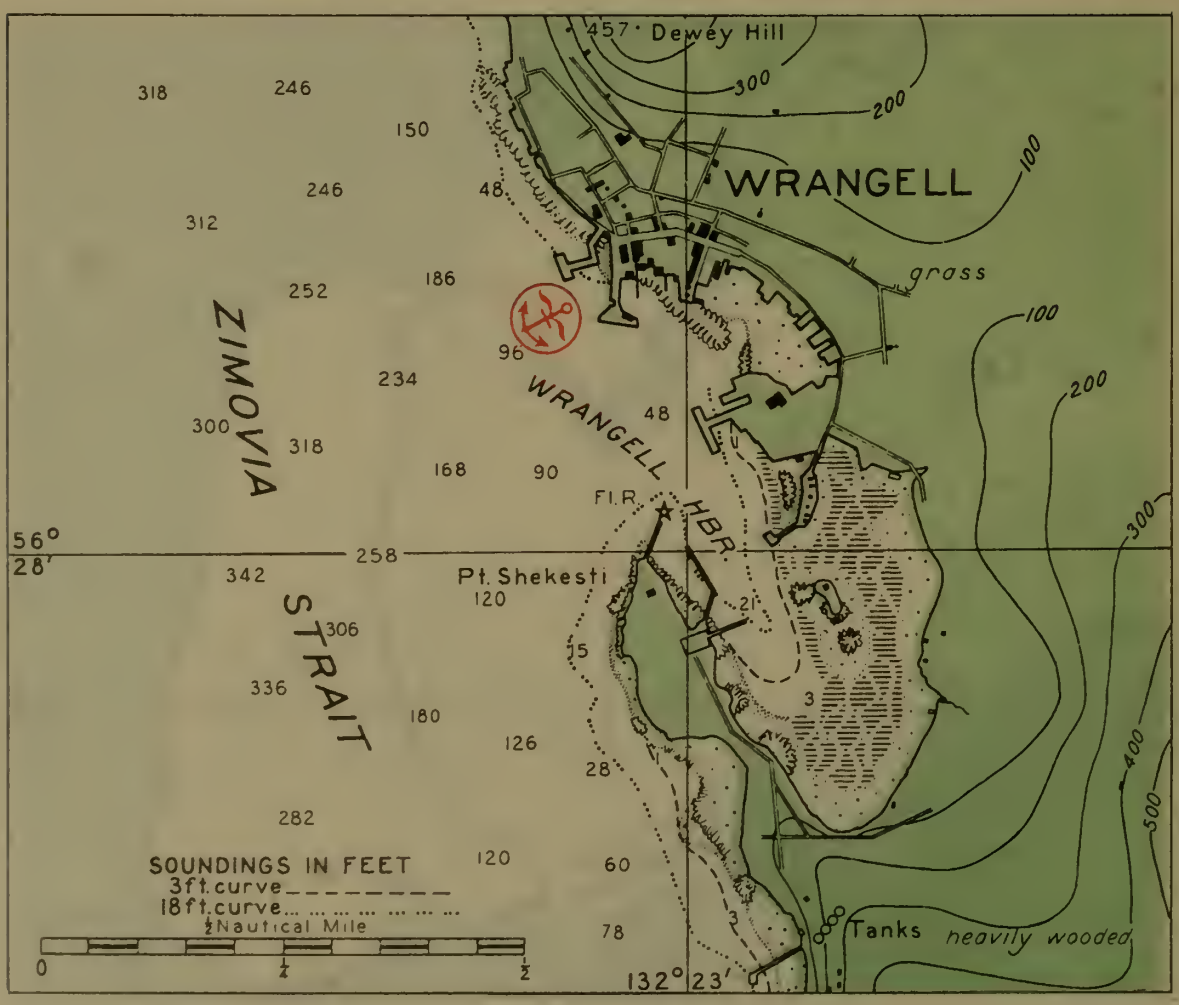
GENERAL INFORMATION

Meteorological conditions: Weather conditions are bad. Winds, fog, and rain are the rule. May, June, and July are supposedly the best months, but those months conditions are only fair.

Tender anchorage: The only entrance channel recommended is that between Channel Rock and East Channel Island, which has been surveyed. Anchorage may be had at convenience, with excellent holding ground in any depth from 5 to 20 fathoms. Small craft can anchor in lee of the various islands. The best anchorage in easterly weather is close under Titcliff Island.

Remarks: Local attraction has been observed in the vicinity of entrance.


Rynda I.
Green Pt.
Kadin I.
Greys I.
Sokolof I.
Vank I.
Fl.
Pt Highfield
WRANGELL
RS(WT G)
Wrangell Hbr
Gerard Pt.
Babbler Pt
Wrangell Pk.
3750
3700
3100
3070
3010
3415
2550
2800
2645
2600
WRANGELL I.
EASTERN STRAIT
ZIMOVIA STRAIT
STIKINE STRAIT
Mt. Woronkofski
Woronkofski I.
2715
2725
3305
3090
2100
1290
1810
1100
830
908
2583
132° 20'
56° 30'
Nautical Miles
0
5


457 Dewey Hill
WRANGELL
grass
WRANGELL HBR
Fl.R.
Pt. Shekesti
ZIMOVIA STRAIT
Tanks
heavily wooded
SOUNDINGS IN FEET
3ft. curve
18ft. curve
½ Nautical Mile
0
½
1
56° 28'
132° 23'
318
246
150
312
48
252
186
96
234
300
318
168
90
342
258
120
306
15
336
180
126
28
282
60
78
21
3
100
200
300
400
500

WRANGELL

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 56°28′ N., Long. 132°23′ W.)

DESCRIPTION

Location: Wrangell Harbor, adjacent to the village. **Depth:** 6 to 60 feet. **Tidal range:** 13.8 feet. **Character of bottom:** Mud. **Currents:** Tidal. **Shelter:** Affords shelter only from offshore winds.

LANDING AND TAKE-OFF AREA

Location: Zimovia Strait. **Area:** Unlimited. **Shelter:** Good. **Obstructions:** Mountains on both sides of strait.

FACILITIES

Specification fuel and oil; machine shop; minor repairs; two marine railways; 30-foot ramp, with platform 112 by 55 feet built on piles. **Beach:** suitable for hauling out, 1 mile south of the village. Wrangell is a village and post office on the north side of Wrangell Harbor. Two oil companies maintain stations with private wharves. A relief station of the United States Public Health Service in Wrangell. **Communications:** Army radio station, call letters, WTG; cable; regular steamship communication with Puget Sound and British Columbia ports, and with all towns in southeastern and southwestern Alaska.

GENERAL INFORMATION

Meteorological table: See page 43.

Landmarks: 457-foot hill north of town; docks at Wrangell.

Tender anchorage: As anchorage for large vessels affords shelter only from offshore winds. Best anchorage for large vessels in 18 to 20 fathoms with breakwater light bearing 110° (t) distant 300 yards. During heavy southeast winter gales Highfield anchorage at the north end of Wrangell Island affords better shelter. Several wharfs with depths of 18 to 33 feet alongside.

Remarks: Airport of entry for customs purposes.


Nautical Miles
1 0 1 2 3 4
139° 40′
KNIGHT I.
4271
59° 40′
BAY
Krutoi I.
YAKUTAT
Kriwoi I.
KHANTAAK I.
DOLGOI I.
Lake Redfield
Fl.
Monti Bay
YAKUTAT
OCEAN CAPE
Fl.131′


139° 45′
59° 35′ 40
KHANTAAK I.
MONTI BAY
Fl.
Pt. Turner
Yakutat Pass
YAKUTAT
Puget Cove
Mission
Cannery
Pt. Carrew
Ankau Head
Fl.
Nautical Miles
1 1/2 0

YAKUTAT BAY

SOUTHEAST ALASKA

SEAPLANE ANCHORAGE

(Lat. 59°34′ N., Long. 139°45′ W.)

DESCRIPTION

Location: Yakutat Roads, adjacent to the native village. **Depth:** 6 to 60 feet. **Tidal range:** 7.4 feet. **Character of bottom:** Mud. **Currents:** Negligible. **Shelter:** Good.

LANDING AND TAKE-OFF AREA

Location: Yakutat Roads and Monti Bay. **Area:** Monti Bay, 1.5 by 2 miles; Yakutat Roads, ⅜ by 1 mile. **Shelter:** Exposed to E., SE., and SW. winds, sheltered from offshore winds. **Obstructions:** Shoals.

FACILITIES

None. **Good beach,** with a gradual slope. Yakutat is a post office and native village with two general stores and a cannery. **Communication:** Radio station operated by cannery during the season. Small boat available.

GENERAL INFORMATION

Meteorological table: See page 44.

Tender anchorage: Yakutat Bay affords good anchorage, the best between Cape Spencer and Prince William Sound. The depths in the bay are irregular, ranging from 7 fathoms to 167 fathoms. Anchorage can be made in almost any part of Yakutat Roads. Best anchorage for large vessels is in 22 to 23 fathoms with the point at the north end of village bearing 141° (t) distant 700 yards. Anchorage may also be made at the head of Monti Bay below the cannery in 20 to 25 fathoms.

Remarks: Large well-protected harbor with ample take-off area. Relief cabins are built along the beach west of Yakutat in the following localities: Cape Suckling, near the beach; Suju River, 1 mile above mouth; Middle Timber River, 1 mile above mouth; no information available as to present condition.

CORRECTIONS AND ADDITIONS

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CORRECTIONS AND ADDITIONS

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CORRECTIONS AND ADDITIONS

CORRECTIONS AND ADDITIONS

CORRECTIONS AND ADDITIONS

Part III

PHOTOGRAPHS OF SEAPLANE ANCHORAGES, LANDING FIELDS, LANDMARKS, AND AIDS TO AIR NAVIGATION



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


135°
130°
60°
55°
INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
Skagway
Skagway
Chilkat R.
Muir Glacier
Lynn Canal
Glacier Bay
Taku R.
Juneau
Juneau
Icy Strait
3020
HRC
Chichagof Island
Stephens Passage
Admiralty I
Chatham Strait
Baranof I
Kruzof I
Sitka
C Edgecumbe
Sitka Sound
Mt. Edgecumbe
Sitka
Frederick Sound
Kupreanof Island
Devils Thumb 9077
Kates Needle 10,002
Petersburg
Petersburg
Stikine R.
Wrangell
Wrangell
Unuk R.
Kuiu I
Sumner Strait
C Ommaney
Hazy Is.
Coronation I.
Ishigeyma Bay
Prince of Wales I
Clarence Strait
Cleveland Penn
Behm Canal
Revillagigedo Island
Ketchikan
Portland Canal
Noyes I
Kawak
Ketchikan
C Bartolome
Metlakatla
Wolf Rk
Forrester I (1408)
C Muzon
1783
C Chacon
Port Simpson
Dixon Entrance
Prince Rupert
C Knox
2591
Index 1



SOUTHEAST ALASKA—METLAKATLA.
Seaplane anchorage.



SOUTHEAST ALASKA—KETCHIKAN.
Seaplane anchorage.



SOUTHEAST ALASKA—WRANGELL.
Seaplane anchorage.



SOUTHEAST ALASKA—PETERSBURG.
Seaplane anchorage.



SOUTHEAST ALASKA—SITKA.
Seaplane anchorage.



SOUTHEAST ALASKA—SITKA SOUND.
Cape Edgecumbe and Mount Edgecumbe, prominent landmark for Sitka Sound.



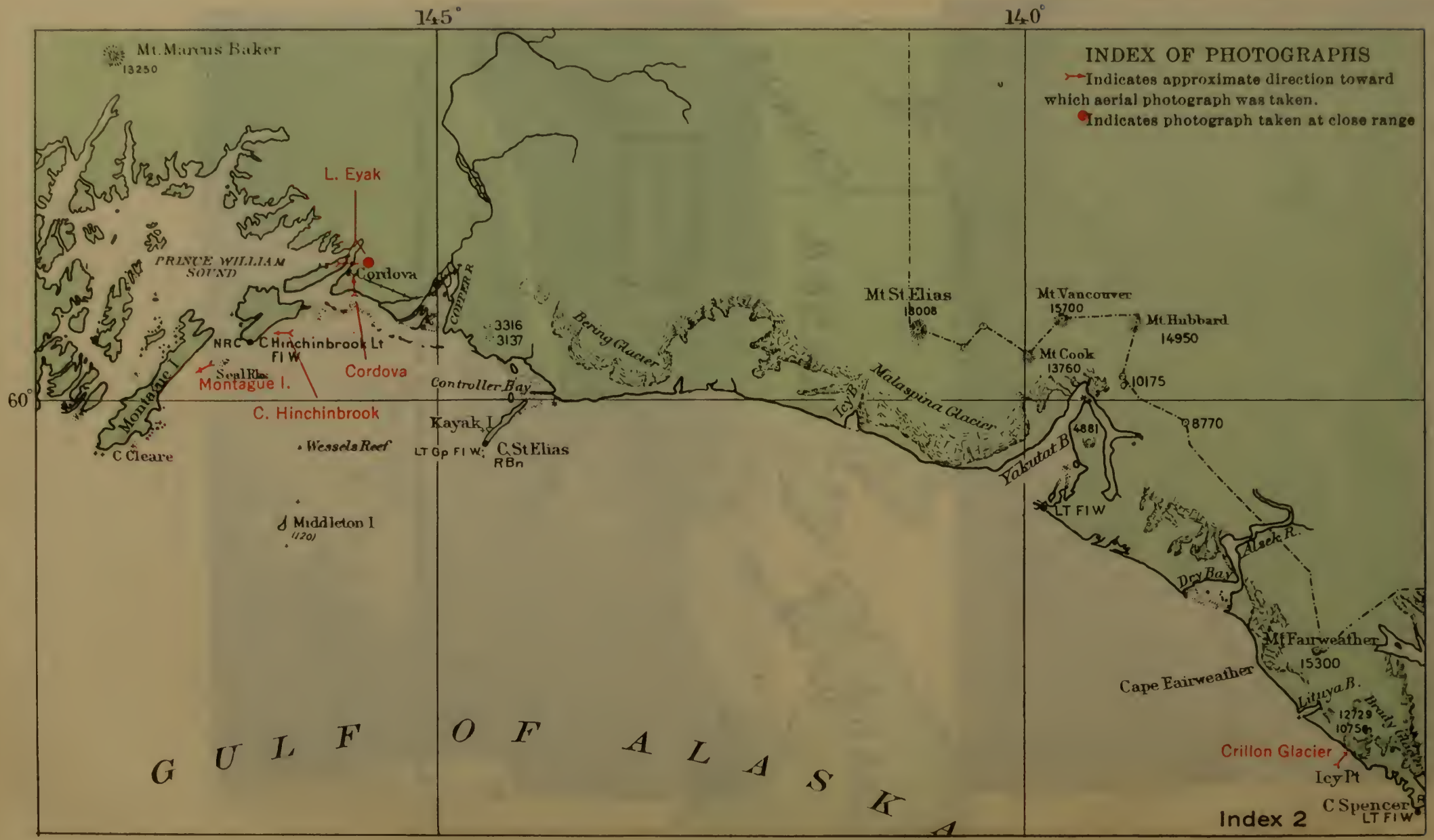
SOUTHEAST ALASKA—JUNEAU.
Seaplane anchorage.



SOUTHEAST ALASKA—SKAGWAY.
Seaplane anchorage.



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


145°
140°
60°
INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
Mt. Marcus Baker
13250
L. Eyak
PRINCE WILLIAM SOUND
Cordova
COPPER R.
3316
3137
Bering Glacier
Mt St Elias
18008
Mt Vancouver
15700
Mt Hubbard
14950
Mt Cook
13760
10175
8770
Malaspina Glacier
Icy B.
Yakutat B.
4881
NRC
C Hinchinbrook Lt
FlW
Seal Rks
Montague I.
Cordova
C. Hinchinbrook
Montague I
Controller Bay
Kayak I.
C St Elias
RBn
LT Gp Fl W
C Cleare
Wessels Reef
Middleton I
(120)
LT Fl W
Alsek R.
Dry Bay
Mt Fairweather
15300
Cape Fairweather
Lituya B.
12729
10756
Crillon Glacier
Icy Pt
C Spencer
LT Fl W
GULF OF ALASKA
Index 2



SOUTHEAST ALASKA—LITUYA BAY AREA.
Crillon Glacier, the most prominent landmark along the coast between Sitka and Lituya Bay.



CORDOVA—LAKE EYAK.
Seaplane ramp and hangar.



PRINCE WILLIAM SOUND—CORDOVA, LOOKING NORTH.



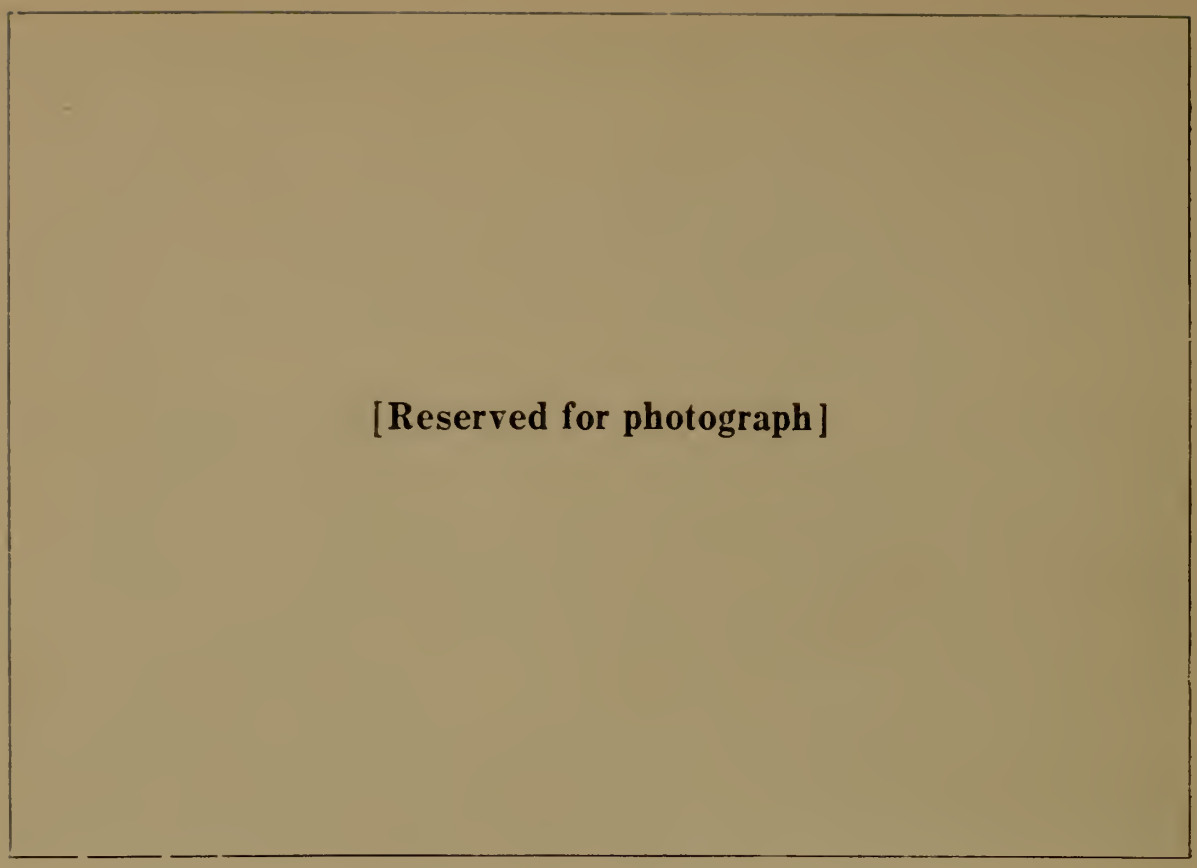
CORDOVA—LAKE EYAK
Seaplane anchorage.



PRINCE WILLIAM SOUND—HINCHINBROOK ISLAND, LOOKING WEST OVER LIGHT-HOUSE ON CAPE HINCHINBROOK.



PRINCE WILLIAM SOUND—MONTAGUE ISLAND, LOOKING SOUTHWEST ALONG SOUTHEAST SHORE OF MONTAGUE ISLAND.


[Reserved for photograph]


[Reserved for photograph]



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


152°
150°
148°
60°
COOK INLET
KENAI PENINSULA
KACHEMAK BAY
Seward
Whidbey B.
Resurrection B.
Latouche
Homer Spit
Seldovia B.
Seldovia
P. Chatham
Halibut Cove
Harris B.
Aialik B.
Nuka B.
Chugach Is.
Kenai Lake
Crown Pk
Port Bainbridge
RESURRECTION BAY
Aialik Bay
Nuka Bay
Nuka Passage
Mc Arthur Pass
Pye Ledge
Port Dick
Gore Pt
Cape Elizabeth
Dangerous Cape
Port Graham
Anchor Pt
Bluff Pt
Homer
Seldovia
Chugach Is
Elizabeth I
Pearl I
Black Mt
Granite C
Two Arm B
Aiaik C
Chiswell Is
Seal Rks
Pye Is
Gore Pt
Mills Mt
Needle Pk
Sadie Cove
Halibut Cove
Yukon I
C. Nukshak
C. Ninilchik
C. Starichkof
Tustumena Lake
Kenai Lake
Seward
Ellsworth Gl.
Excelsior Gl.
Puget Bay
C Resurrection
C Farrfield
C Junken
C Puget
Day Hbr
Pt Elrington
Rugged I
Aialik C
Harris B
Granite C
Two Arm B
Black Mt
Chiswell Is
Seal Rks
Pye Is
Pye Ledge
Mc Arthur Pass
Nuka Passage
Nuka Bay
Port Dick
Gore Pt
Mills Mt
Needle Pk
Sadie Cove
Halibut Cove
Yukon I
Seldovia
Anchor Pt
Bluff Pt
Homer
Cape Elizabeth
Elizabeth I
Pearl I
Chugach Is
C. Nukshak
C. Ninilchik
C. Starichkof
Tustumena Lake
Kenai Lake
Seward
Ellsworth Gl.
Excelsior Gl.
Puget Bay
C Resurrection
C Farrfield
C Junken
C Puger
Day Hbr
Pt Elrington
Rugged I
Aialik C
Harris B
Granite C
Two Arm B
Black Mt
Chiswell Is
Seal Rks
Pye Is
Pye Ledge
Mc Arthur Pass
Nuka Passage
Nuka Bay
Port Dick
Gore Pt
Mills Mt
Needle Pk
Sadie Cove
Halibut Cove
Yukon I
Seldovia
Anchor Pt
Bluff Pt
Homer
Cape Elizabeth
Elizabeth I
Pearl I
Chugach Is
INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
Index 3



PRINCE WILLIAM SOUND—LATOUCHE ISLAND, LATOUCHE VILLAGE.
Seaplane anchorage.



KENAI PENINSULA—WHIDBEY BAY, LOOKING NORTH TOWARD HARDING GLACIER.



KENAI PENINSULA—RESURRECTION BAY, LOOKING NORTH TO HEAD OF BAY. SEWARD ON LEFT.



KENAI PENINSULA—RESURRECTION BAY, SEWARD.
Seaplane anchorage and landing field.



KENAI PENINSULA—AIALIK BAY, HOLGATE, PEDERSON, AND AIALIK GLACIERS.



KENAI PENINSULA—ENTRANCE TO RESURRECTION BAY: BEAR GLACIER TO LEFT.



KENAI PENINSULA—NUKA BAY, McCARTY GLACIER.



KENAI PENINSULA—HARRIS BAY, NORTHWESTERN GLACIER.



KENAI PENINSULA—CHUGACH ISLANDS, LOOKING SOUTHWEST TOWARD CHUGACH AND BARREN ISLANDS.



KENAI PENINSULA—PORT CHATHAM, LOOKING SOUTHWEST.
Seaplane anchorage.



KENAI PENINSULA—PORT CHATHAM, LOOKING NORTHEAST TOWARD HEAD OF BAY.



KENAI PENINSULA—SELDOVIA BAY, LOOKING SOUTH; SELDOVIA IN LEFT CENTER



KENAI PENINSULA—SELDOVIA.
Seaplane anchorage.



KENAI PENINSULA—KACHEMAK BAY, HALIBUT COVE, LOOKING SOUTHEAST.

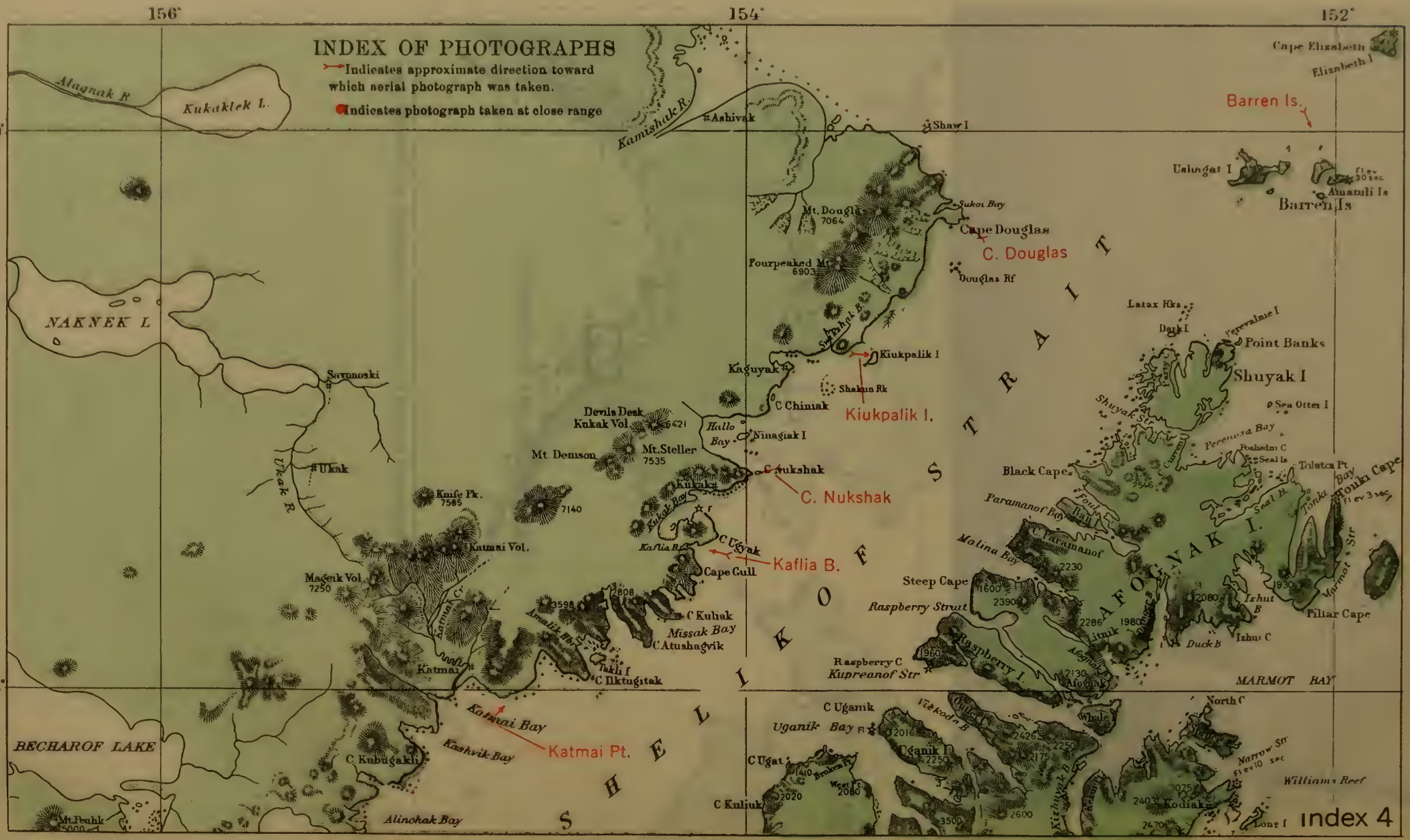


KENAI PENINSULA—KACHEMAK BAY, HOMER SPIT, AND COAL BAY, LOOKING NORTHWEST.

[Reserved for photograph]



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
156°
154°
152°
59°
58°
Barren Is.
C. Douglas
Kiukpalik I.
C. Nukshak
Kaflia B.
Katmai Pt.
Katmai Bay
Kashvik Bay
Alinchak Bay
BECHAROF LAKE
NAKNEK L
SHELIKOF STRAIT
KODIAK I.
MARMOT BAY
Alagnak R
Kukaklek L.
Kamishak R.
Ashivak
Shaw I
Cape Douglas
Mt. Douglas 7064
Fourpeaked Mt 6903
Douglas Rf
Sukoi Bay
Kiukpalik I
Kaguyak
Shakun Rk
C Chiniak
Devils Desk
Kukak Vol 6421
Hallo Bay
Ninagiak I
Mt. Denison
Mt. Steller 7535
C Nukshak
Kukak
Kukak Bay
Kaflia B
C Ugyak
Cape Gull
Knife Pk. 7585
7140
Katmai Vol.
Mageik Vol. 7250
Katmai C
Amalik Bay
C Kuliak
Missak Bay
C Atushagvik
Takli I
C Iktugitak
Katmai
Savonoski
Ukak
Ukak R
Mt Peuhk 5000
C Kubugakli
C Uganik
Uganik Bay
C Ugat
C Kuliuk
Broken I
West I
Uganik I
Whale
Sitkoda B
Kiliuda B
Kiliuda Bay
Kupreanof Str
Raspberry C
Raspberry I.
Afognak
Litnik
Raspberry Strait
Steep Cape
Malina Bay
Paramanof
Paramanof Bay
Foul Bay
Black Cape
Perenosa Bay
Shuyak Str
Shuyak I
Point Banks
Sea Otter I
Seal Is
Seal B
Tolstoi Pt
Tonki Bay
Tonki Cape
Marmot Str
Pillar Cape
Izhut B
Izhut C
Duck B
Latax Rks
Dark I
Perevalnoi I
Uganik
Kodiak
North C
Narrow Str
Williams Reef
Long I
Cape Elizabeth
Elizabeth I
Uslugat I
Amanuli Is
Barren Is
index 4



KENAI PENINSULA—BARREN ISLANDS, AMATULI ISLANDS, LOOKING SOUTH-SOUTHEAST.



ALASKA PENINSULA—CAPE DOUGLAS, LOOKING NORTHWEST.



ALASKA PENINSULA—KIUKPALIK ISLAND, LOOKING EAST.



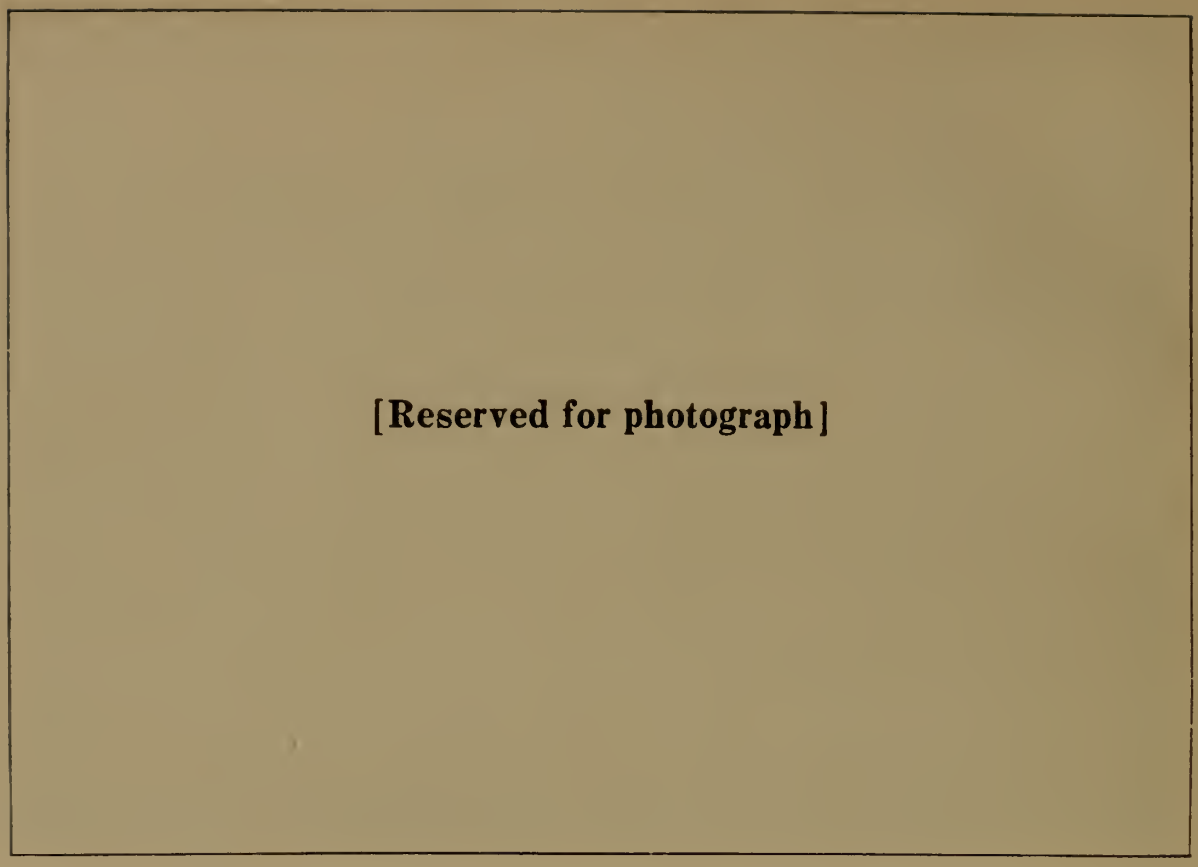
ALASKA PENINSULA—CAPE NUKSHAK, LOOKING EAST-SOUTHEAST TOWARD KUKAK BAY.

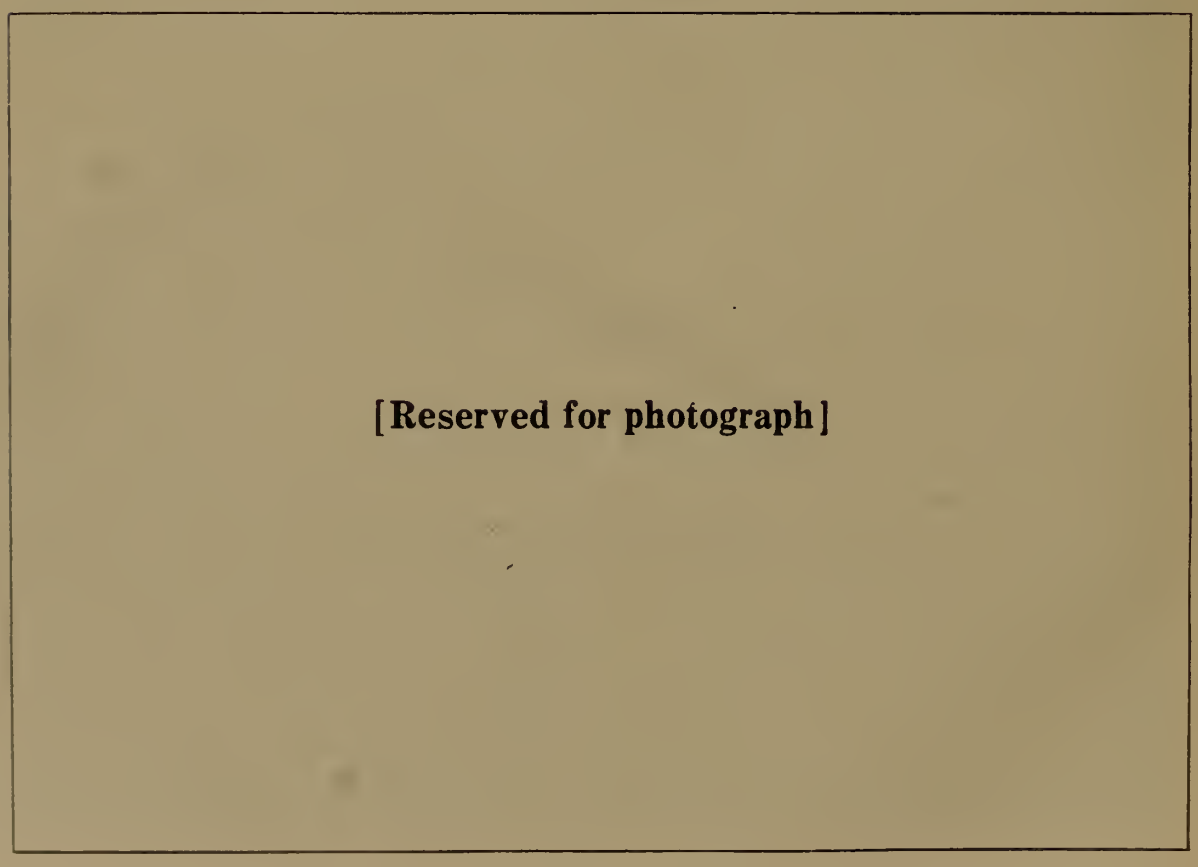


ALASKA PENINSULA—KAFLIA BAY, LOOKING NORTHWEST.



ALASKA PENINSULA—KATMAI POINT TO CAPE ILKTUGITAK, LOOKING EAST-NORTHEAST.


[Reserved for photograph]


[Reserved for photograph]



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


156°
154°
152°
Karluk R
Halibut B
Wide B
Olga B.
Uyak B.
Larsen B.
Cove (W. of Narrow C.)
Chiniak B
Kodiak
Chiniak B
CHINIAK BAY
C. Chiniak
Ugak I.
C. Barnabas
Port Hobron
KODIAK I.
Cape Karluk (1398)
Karluk
Uyak Bay
Karluk Lake
Halibut B
Seal Rocks
Cape Ikolik
Anvil Mt
Ayakulik I
Olga Bay
Low Cape
Cape Alitak
Elev 12 sec 63 ft
Alitak Bay
Cape Trinity
Russian Hbr
Geese Is
Ayaktalik I
Sitkinak Strait
Tugidak I.
Sitkinak I.
Trinity Islands
Ugak Bay
Eagle Hbr
Gull Pt
Narrow C
Cape Chiniak
Williams Reef
Kodiak
Kiliuda B
Dangerous C
Flev 10 sec
Sitkalidak Str
Sitkalidak I
Three Saints B
Nunamiut
Kaiugnak Bay
Puffin I
Black Point
C Kiavak
Two Headed I
Kaiugnak Bay
Uyak P.O.
Rocky Pt
C Uyak
C Kaliuk
Karluk
Larsen B
Zachar B.
South Arm
Middle B
Litnik B
Kiliuda Bay
Old Hbr
Port Hobron
C Barnabas
Alinchak Bay
C Kekurnoi
Cold Bay
C Aklek
Dry Bay
C Unalishagvak
Portage Bay
C Kanatak
Igvak
Wide Bay
C Kayakliut
Imuya Bay
Kilokak Pks
Agripina Bay
Ashmiak I
David I
Port Wrangell
Chiginagak Bay
Aiugnak Columns
Mt Peuhk
Mt Purdin
Mt Lee
Mt Demlan
Mt Ugashik
Kanatak
Mt Bechtold
Mt Shannon
Karluk R
Shumee R.
Akhiok
Lazy B.
Kempff Bay
Kaiugnak
Kaiugnak Bay
Low Cape
Olga Bay
Ayakulik R.
Karluk Lake
Uyak Bay
Rocky Pt
Uyak P.O.
Cape Karluk
Karluk
Larsen B
Zachar B.
Middle B
Litnik B



KODIAK ISLAND—CHINIAK BAY, LOOKING SOUTHWEST FROM KODIAK TOWARD MIDDLE AND KALSIN BAYS; KODIAK IN RIGHT FOREGROUND.



KODIAK ISLAND—KODIAK.



KODIAK ISLAND—CHINIAK BAY, LOOKING NORTHEAST FROM WOMENS BAY TOWARD KODIAK.



KODIAK ISLAND—CAPE CHINIAK, LOOKING SOUTHWEST TOWARD UGAK ISLAND.



KODIAK ISLAND—COVE WEST OF CAPE NARROW, LOOKING NORTHEAST.



KODIAK ISLAND—UGAK ISLAND, LOOKING NORTH.



KODIAK ISLAND—SITKALIDAK ISLAND, PORT HOBRON, LOOKING SOUTHWEST.



KODIAK ISLAND—SITKALIDAK ISLAND, CAPE BARNABAS, LOOKING WEST.



KODIAK ISLAND—OLGA BAY, OLGA BAY CANNERY.



KODIAK ISLAND—HALIBUT BAY, LOOKING SOUTH.



KODIAK ISLAND—MOUTH OF KARLUK RIVER, LOOKING SOUTH OVER KARLUK VILLAGE.



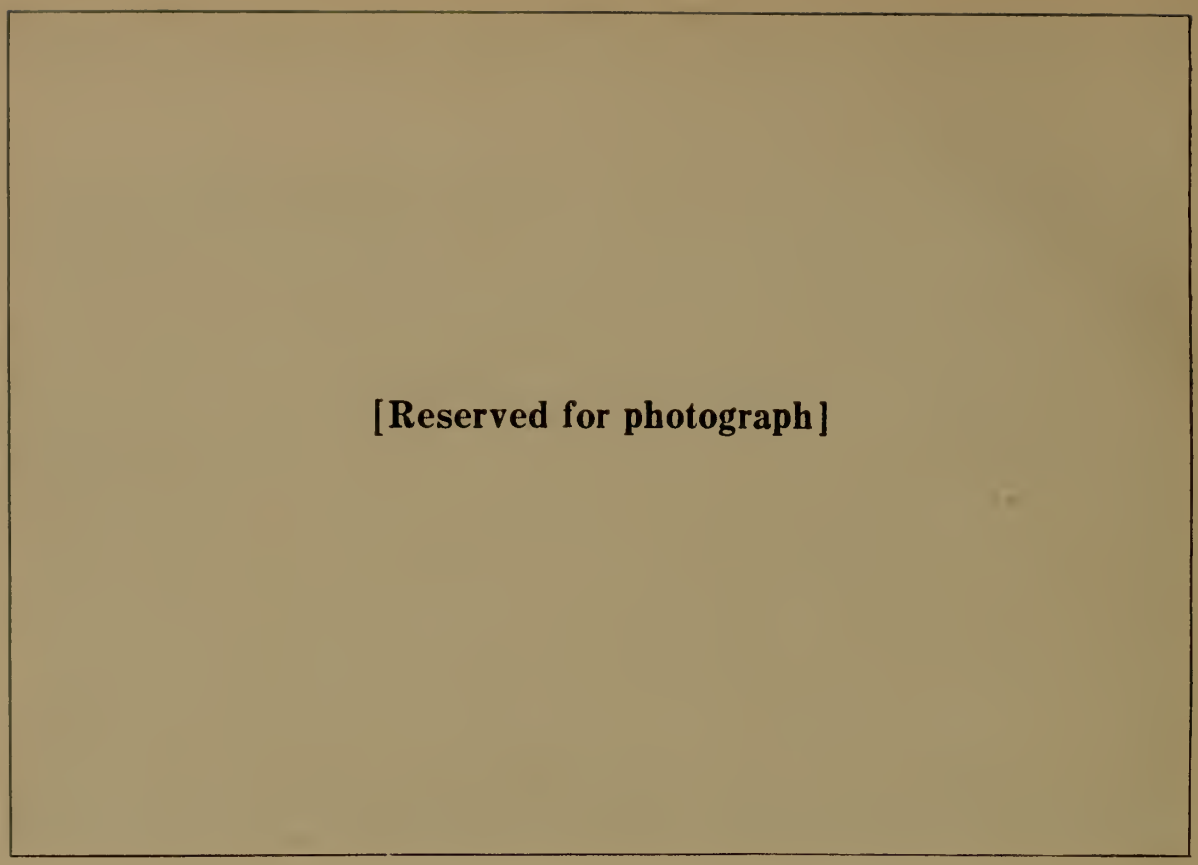
KODIAK ISLAND—UYAK BAY, UYAK CANNERY, LOOKING NORTHWEST.

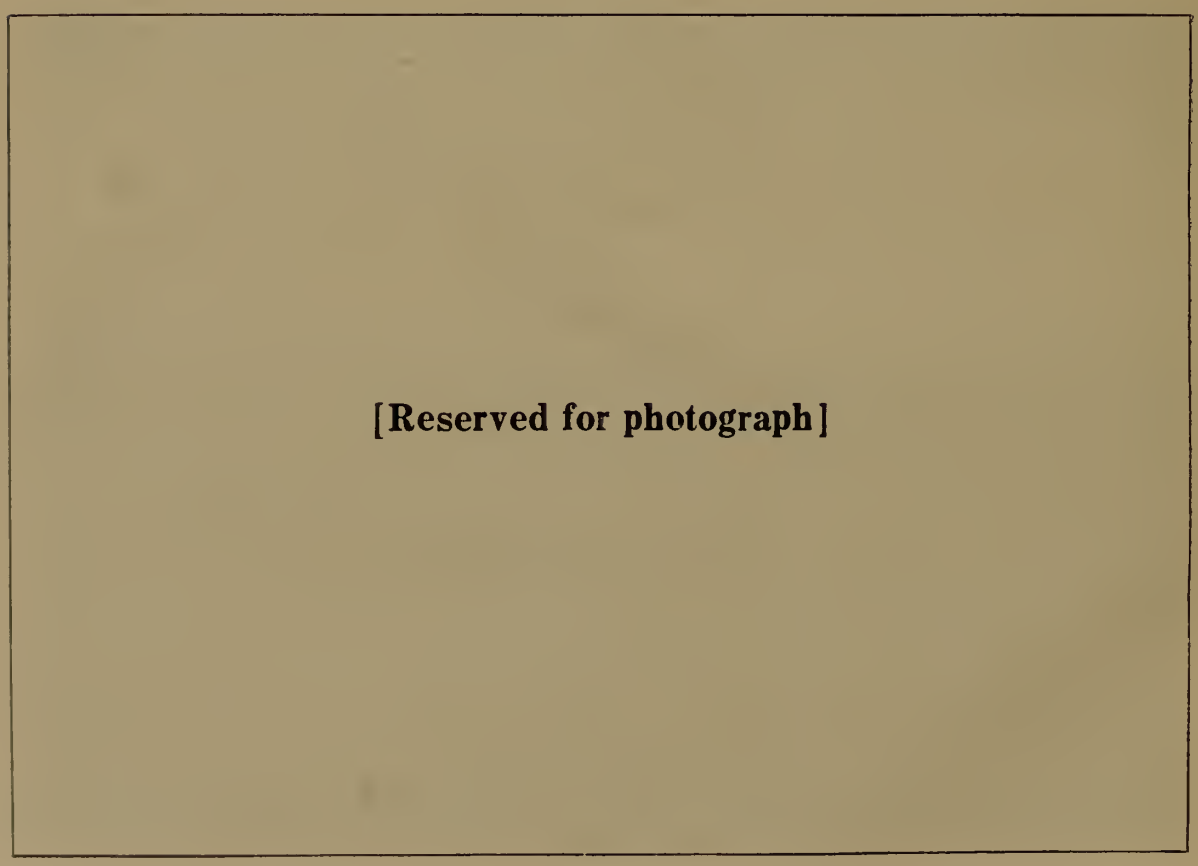


KODIAK ISLAND—LARSEN BAY, LOOKING WEST.
Seaplane anchorage



ALASKA PENINSULA—WIDE BAY, SAND SPIT AND COVE AT WEST END OF WIDE BAY.

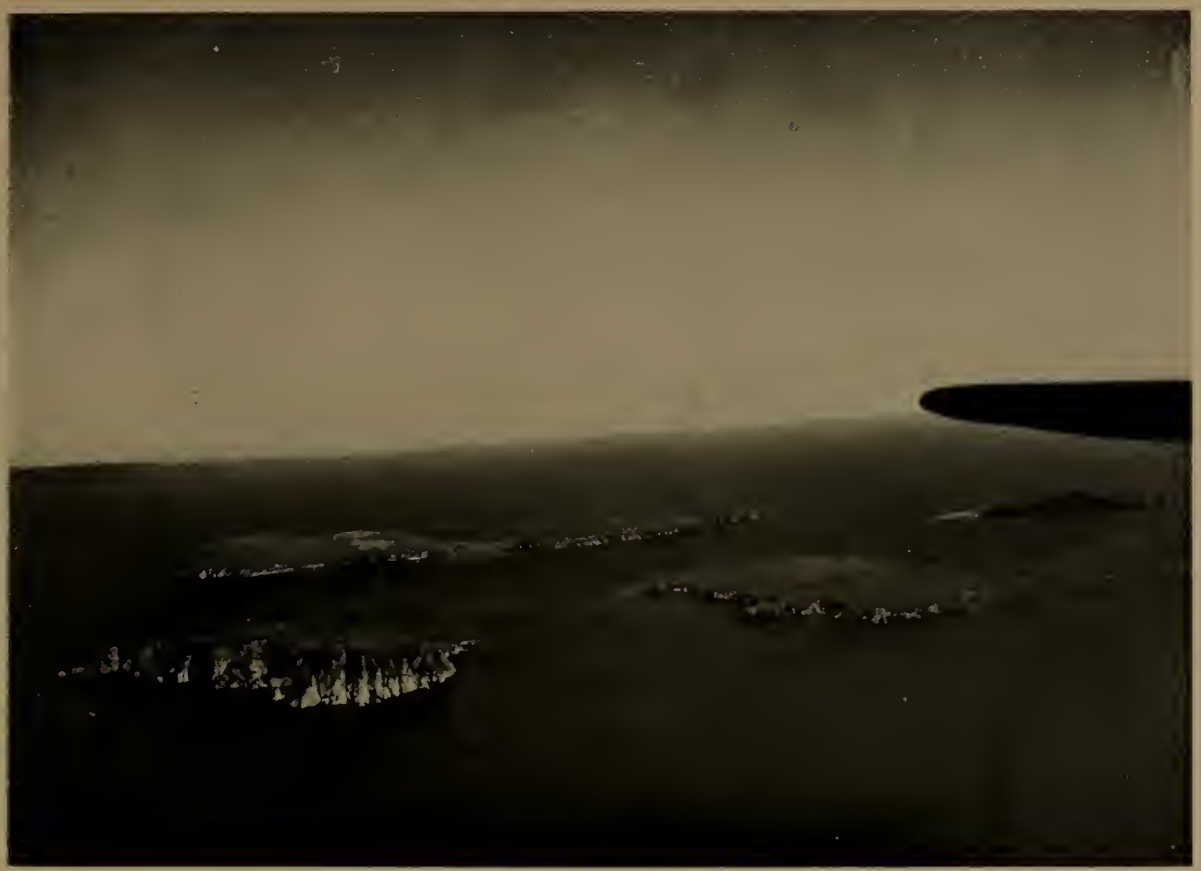

[Reserved for photograph]


[Reserved for photograph]



Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


158°
156°
57°
56°
Kilokak Rks
Mt Chiginagak
Agrippina Bay
Ashmak I
David I
Poltava I
Port Wrangell
C Kuyuyulak
C Povalei
Chiginagak Bay
Aiugnak Columns
Chiginagak B
Nakalilok Bay
Ugaushak I
Yantarni Bay
Hydra I
C Ayuka
Amber Bay
Anuakchak Bay
C Kumlik 2405
Kumlik I.
Kuyulik Bay
Surwik I
Foggy Cape
(PD)
Unavikshak I
Kajalik B.
Katmai Rest
CHIGNIK BAY
Nakchamik I
Anchorage B.
Castle B.
Kak I
Alkolik I
Castle Cape
Chignik Lagoon
Chignik Lake
Veniaminof Vol.
Chankliut I
Warner B.
Kuiukta B.
C Ilkti
Mitrofania I
Chiachi I
Paul I
Jacob I
Spits I
Lighthouse Rocks
Semidi Is.
Aghiyuk I
Aghik I
(1300)
SEMIDI ISLANDS
Kasatuk I
Anowik I
Kilikta ik I
(750)
Chowiet I
(1200)
Suklik I
Akkesmit I
South I
Black Peak
Unangashik
Meshik
Port Heiden
Chisakof I
Strogonof Pt
Meshik R.
Seal Is
Black Lake
Mud Bay
Anchorage Bay
Warner Bay
Mitrofania Bay
Ferryville
Truthen Is
Tasaruk I
Nagai Rks
Chirikof I
INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
Index 6



SEMIDI ISLANDS—KATEEKUK—ANOWIK—KILIKTAGIK, AND SUKLIK ISLANDS, LOOKING EAST-SOUTHEAST.



ALASKA PENINSULA—CHIGINAGAK BAY, LOOKING NORTH TOWARD MOUNT CHIGINAGAK (7,000 FEET).



ALASKA PENINSULA—KUMLIK ISLAND, LOOKING WEST-SOUTHWEST TOWARD CAPE KUMLIK.



ALASKA PENINSULA—CHIGNIK BAY—ANCHORAGE BAY. LOOKING WEST.



ALASKA PENINSULA—WARNER BAY, LOOKING NORTH.



ALASKA PENINSULA—CASTLE BAY, LOOKING SOUTHWARD, CASTLE CAPE ON LEFT.



ALASKA PENINSULA—KAJALIK BAY, LOOKING NORTHWEST FROM CAPE KUMLIUN.

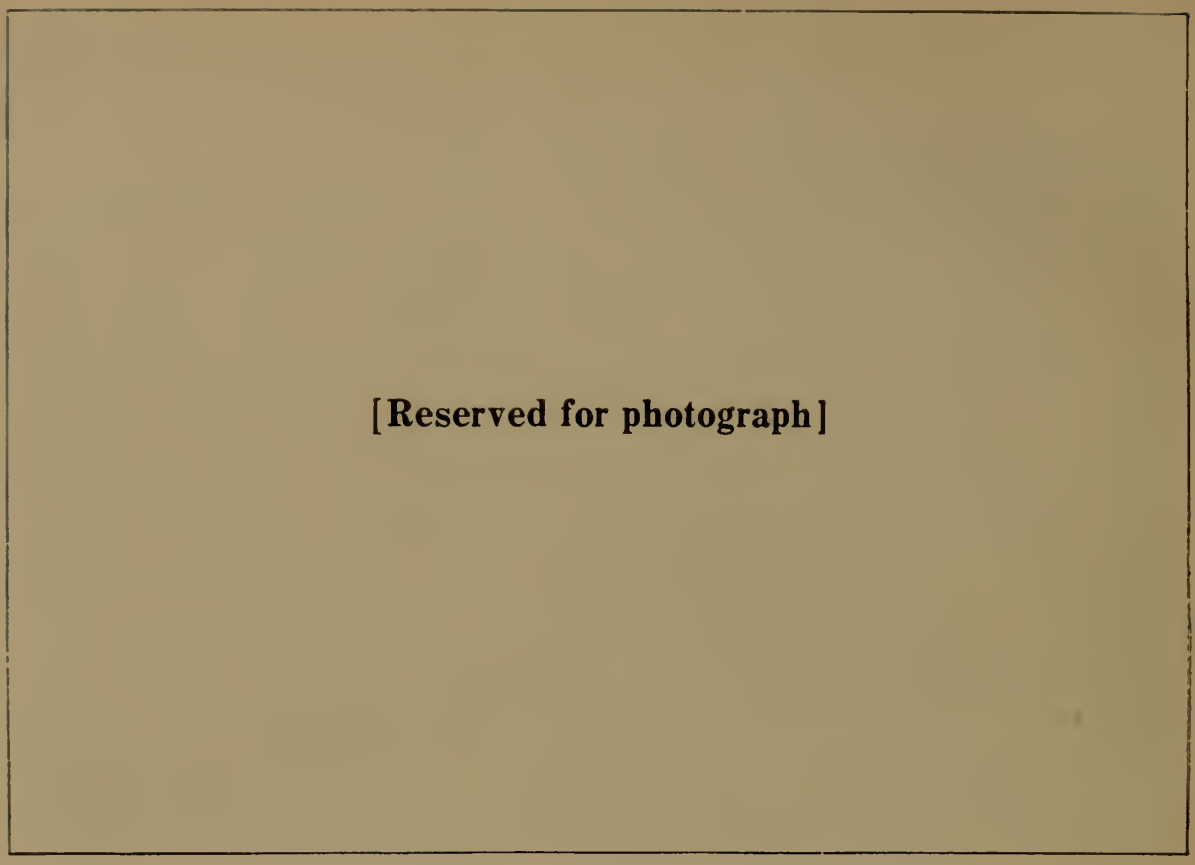


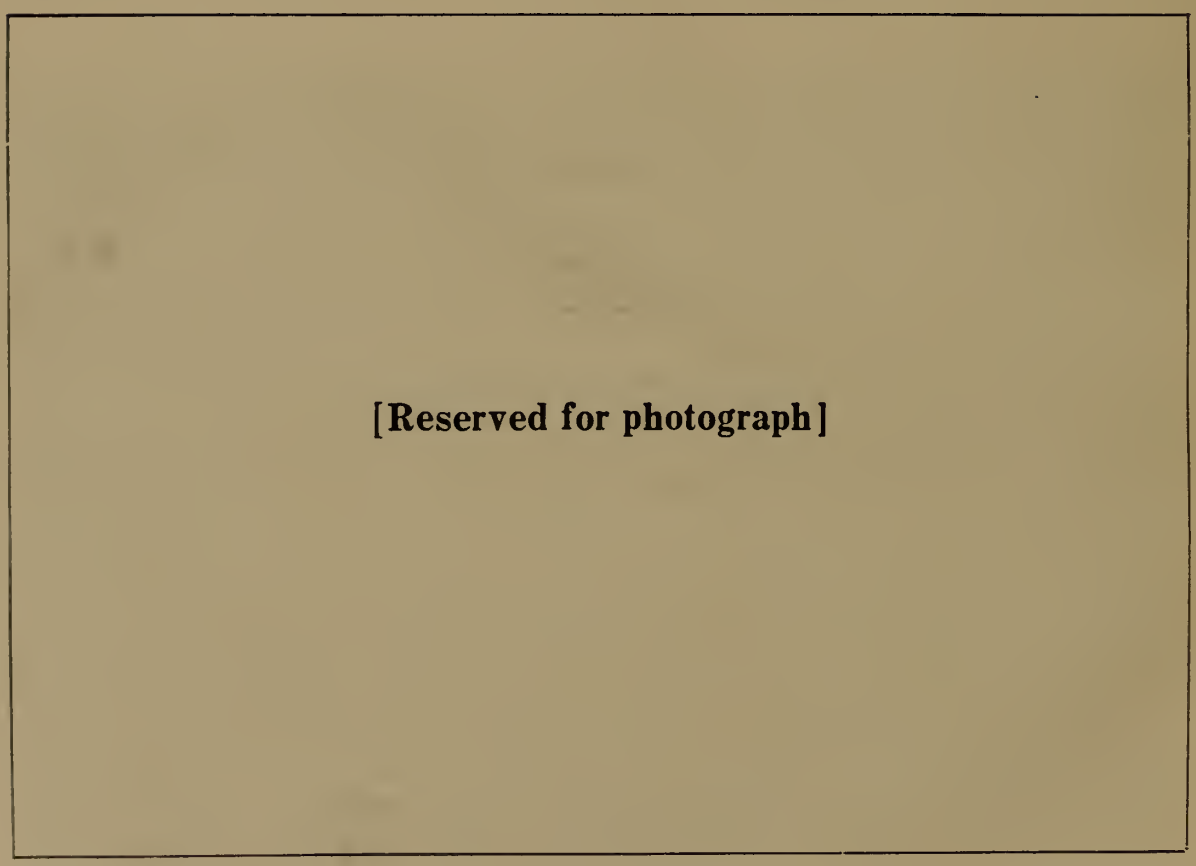
ALASKA PENINSULA—CHIGNIK BAY REGION, VENIAMINOF VOLCANO (8,400 FT.).



ALASKA PENINSULA—KUIUKTA BAY, SMALL LAND LOCKED HARBOR IN MIDDLE OF WEST SIDE OF BAY, LOOKING SOUTH-SOUTHWEST.

[Reserved for photograph]


[Reserved for photograph]


[Reserved for photograph]

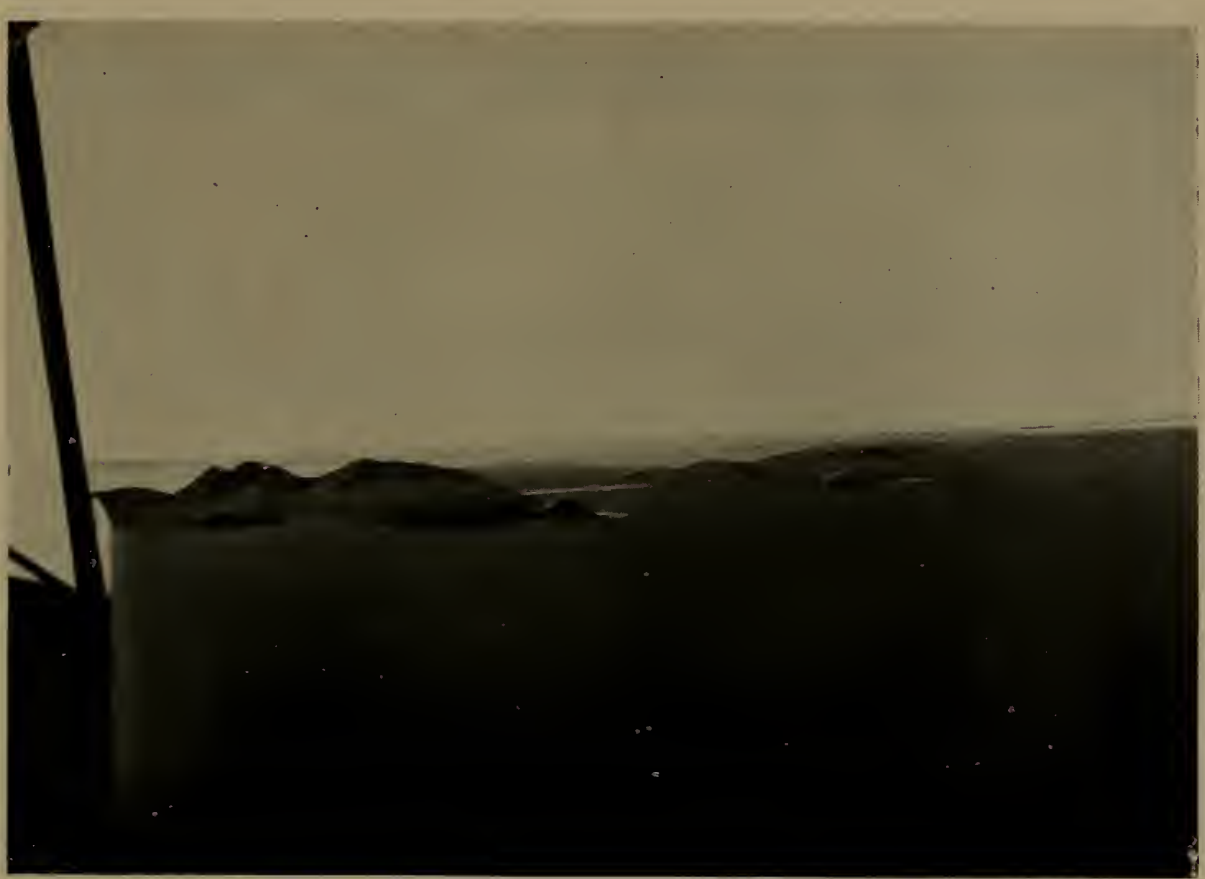


Heavy outline on sketch above indicates area covered by Index of Photographs on following page.


INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
162°
160
158
56°
55°
Boulder B.
Karpa I.
Guillemot I.
Humboldt Hbr.
Popof I.
Ukolnoi I.
Dolgoi Hbr.
Baralof B.
Delarof Hbr.
Mountain Pt.
East Bight
Pavlof Vol.
Belkofski
Big Koniuji I.
Chernabura I.
Index 7
PORT MOLLER
Strait
Unga
POPOF I.
UNGA I.
NAGAI I.
SHUMAGIN
Sandman Reefs
Deer I.
Black Hill
Pavlof Bay
Canoe Bay
Beaver
Coal C.
Fox C.
Fox Bay
Kupreanof P.
Scotland Rk.
Korovin I.
Andronica I.
C. Wedge
Castle Rk.
Spectacle I.
Bendel I.
Turner I.
Near I.
Mountain Pt.
Bird I.
Pt. Welcome
Chernabura I.
Little Koniuji I.
Simeonof I.
Sandy Cove
Atkins I.
Hall I.
Twins
Sea Lion Rks.
Acheredin Pt.
Kennoys Is.
Dolgoi I.
Popof Str.
Eagle Hbr.
Sunbeam Hbr.
Wendy Hbr.
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C. Iku
Castle Cape



ALASKA PENINSULA—STEPOVAK BAY ENTRANCE, BOULDER BAY AND BOULDER POINT LOOKING SOUTHEAST.



SHUMAGIN ISLANDS—NAGAI ISLAND, LOOKING SOUTH-SOUTHEAST TOWARD MOUNTAIN POINT.



SHUMAGIN ISLANDS—NAGAI ISLAND, LOOKING SOUTHWEST ALONG EAST SHORE. EAST BIGHT IN FOREGROUND.



SHUMAGIN ISLANDS—CHERNABURA ISLAND, LOOKING EAST FROM NORTH POINT OF CHERNABURA ISLAND TOWARD SIMEONOF ISLAND.



SHUMAGIN ISLANDS—BIG KONIUJI ISLAND, LOOKING NORTHWEST OVER NORTHERN END OF ISLAND.



SHUMAGIN ISLANDS—KARPA ISLAND, ENTRANCE TO UNGA STRAIT, LOOKING SOUTHWEST TOWARD ANDRONICA ISLAND.



SHUMAGIN ISLANDS—GUILLEMOT ISLAND, ENTRANCE TO UNGA STRAIT, KARPA ISLAND IN DISTANCE.



SHUMAGIN ISLANDS—POPOF ISLAND, NORTH SHORE OF POPOF ISLAND LOOKING WEST FROM PIRATE COVE TOWARD UNGA STRAIT.



SHUMAGIN ISLANDS—UNGA ISLAND CANNERY AT BARALOF BAY.



SHUMAGIN ISLANDS—POPOF ISLAND HUMBOLDT HARBOR—SAND POINT SEAPLANE ANCHORAGE.



SHUMAGIN ISLANDS—UNGA ISLAND BARALOF BAY—SEAPLANE ANCHORAGE, LOOKING WEST.



SHUMAGIN ISLANDS—UNGA ISLAND DELAROF HARBOR, LOOKING WEST.



SHUMAGIN ISLANDS—UNGA ISLAND DELAROF HARBOR, UNGA VILLAGE.



ALASKA PENINSULA—UKOLNOI ISLAND, LOOKING NORTHEAST, WESNESENAKI ISLAND IN RIGHT BACKGROUND.



ALASKA PENINSULA—BELKOFSKI BAY, BELKOFSKI VILLAGE.



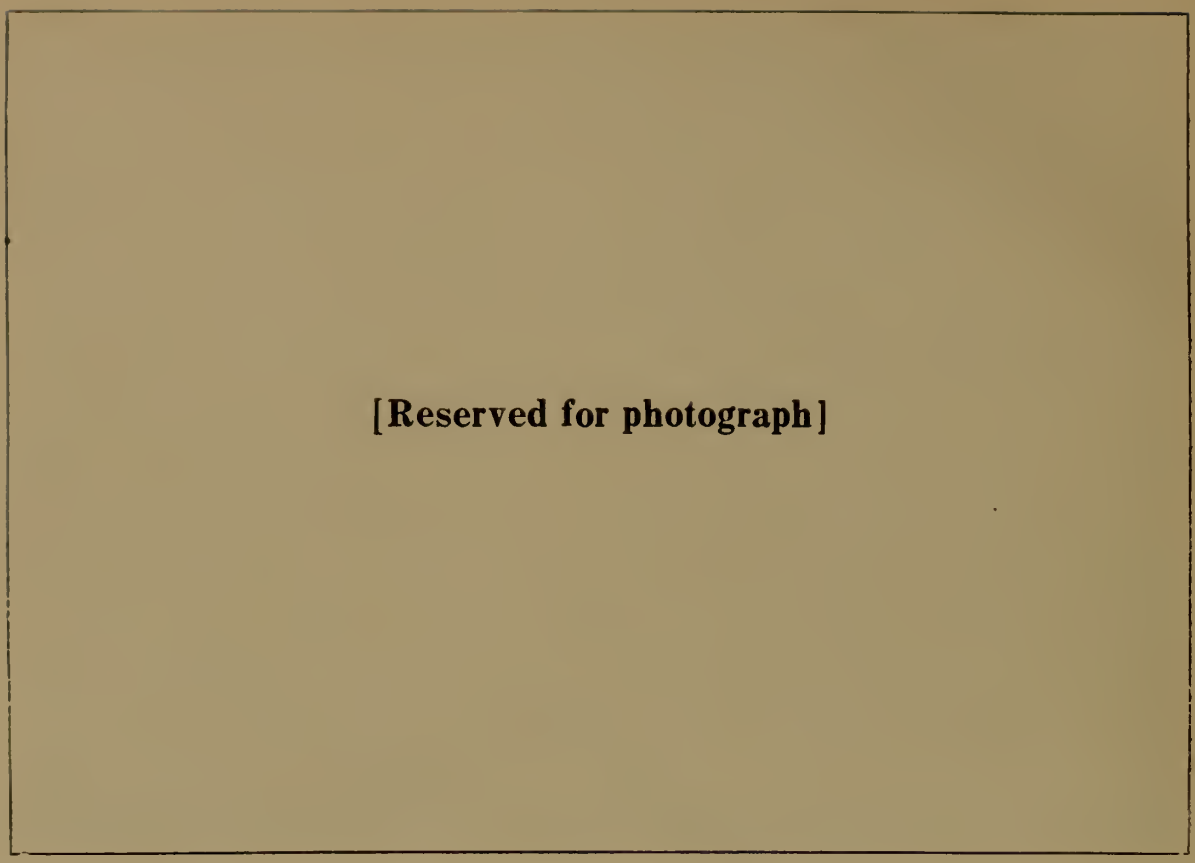
DOLGOI ISLAND—DOLGOI HARBOR ENTRANCE.

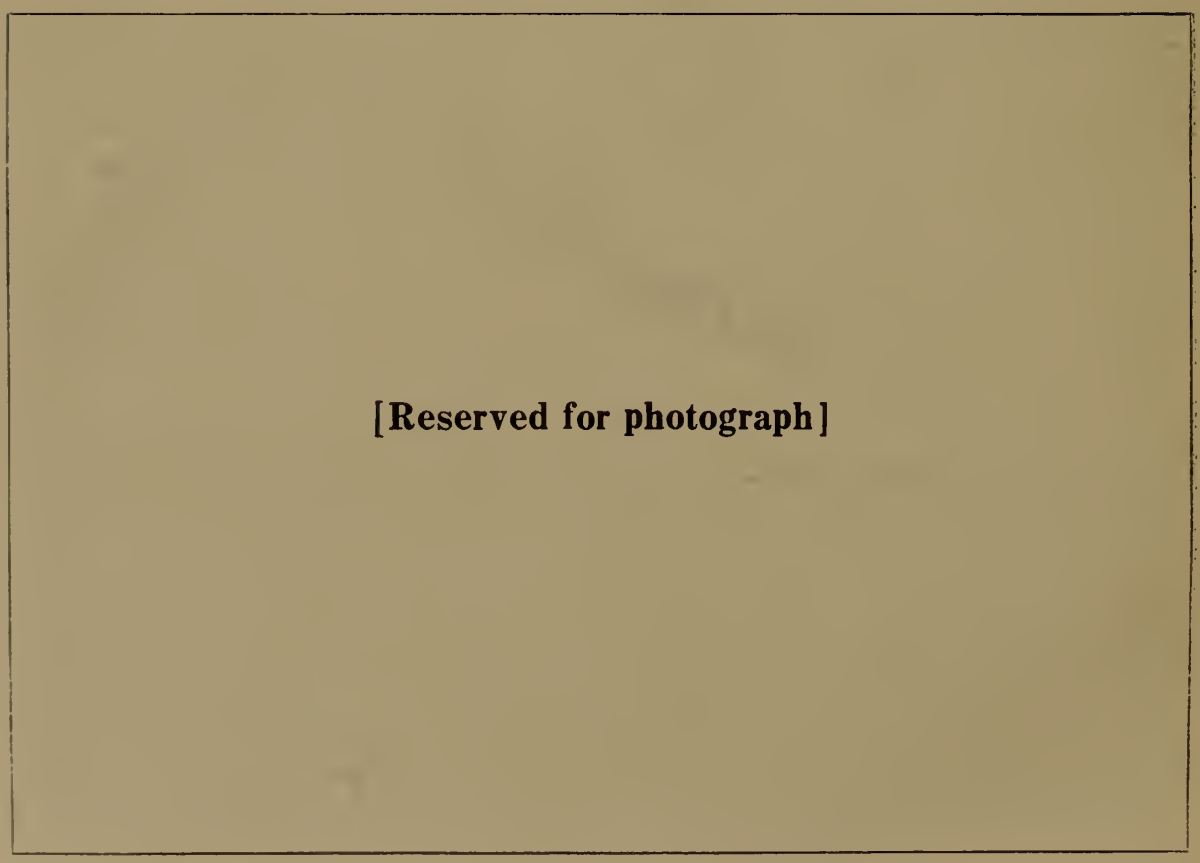


DOLGOI ISLAND—DOLGOI HARBOR, LOOKING NORTHWEST.
Seaplane anchorage.



ALASKA PENINSULA—PAVLOF VOLCANO (8,900 FT.), LOOKING NORTHEAST FROM VOLCANO BAY.


[Reserved for photograph]


[Reserved for photograph]



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Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
165°
164°
163°
162°
55°
54° 30'
UNIMAK I.
Shishaldin Vol.
9387
8088
8032
Isanotski Pks.
Round Top 6155
Isanotski Str.
Ikatan Bay
Ikatan Pen.
Ikatan Pt
Ikatan B.
Sankin I
2020
Morzhovoi
Kennore Hd
Bechevin Bay
C Chunak
C Krenitzen
C Lapin
Urilia Bay
C Mordvinof
Cave Pt
C Sarichef
Pogromni Vol. 6500
OBSCURED
1080
Faris Pk. 5075
Westdahl Pk. 3000
2600
Waterfall
3300
OBSCURED
1100
Scotch Cap
DIAPHONE
R Bn
Arch Pt
Seal Cape
FL ev 6 sec
1326
700
Unimak Bay
Brown Pk 1300
1300
1650
C Aksit
1100
Rock I (130)
C Lazaref
C Lutke
Otter Cove
Bird I
W Anch Cove
W. Anchor Cove
E Anch Cove
FL
C Pankof
Westdahl Rf
Shishaldin Vol.
Isanotski Pks.
Round Top
Glen I
C Glazenap
Izembeck B
Applegate Cove
Lenard Hbr
Glacier
Cold Bay
2760
4929
2000
2375
Lenard Hbr
2150
2290
Boldc
Belkofski R
Morzhovoi Bay
Frosty Pk 5820
2927
Deer I.
King Cove
Stag Pt
2060
Deer I.
Egg I
Amagat I (1065)
Morzhovoi B.
Thin Pt
Cold B.
Fox I
Midnn I
Rush Rk
Umga I (250)
Fawn Pt
Hunt I
Sandman Reefs
Goose I
Hay I
Chernabura I
Hague Rk
Pavlof Hbr.
Sanak Hbr.
Crowley Rk
Pavlof Hbr
Unimak Cove
Johnsons B
ED
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1700
Caton I
Lookout Pt
SANAK IS
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ALASKA PENINSULA—LENARD HARBOR, BELKOFSKI BAY IN DISTANCE.



ALASKA PENINSULA—KING COVE.
Seaplane anchorage.



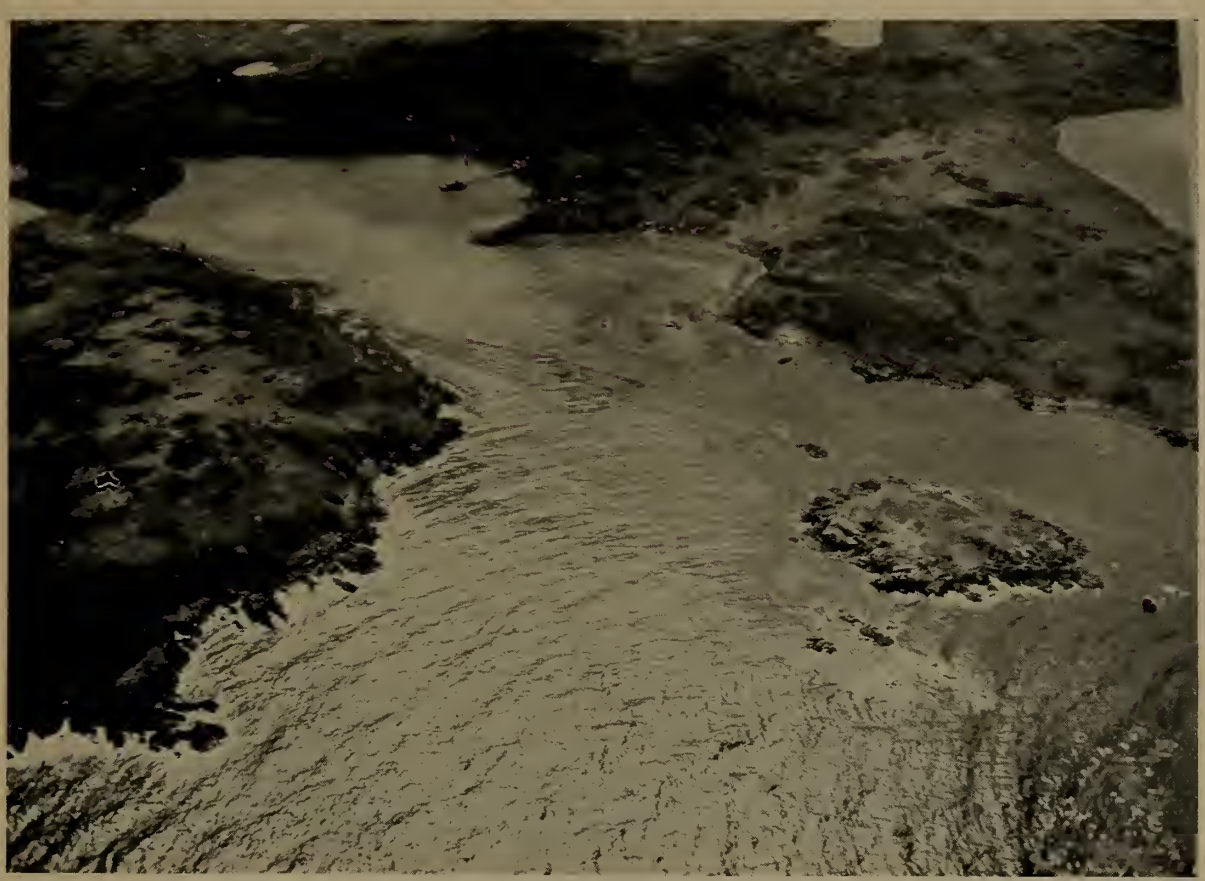
ALASKA PENINSULA—DEER ISLAND, LOOKING SOUTHEAST FROM COLD BAY.



ALASKA PENINSULA—COLD BAY, LOOKING NORTH ALONG WEST SHORE OF BAY FROM THIN POINT.



SANAK ISLAND—SANAK HARBOR LOOKING SOUTHEAST.



SANAK ISLAND—PAVLOF HARBOR LOOKING SOUTH.



ALASKA PENINSULA—MORZHOVOI BAY LOOKING NORTHWEST FROM EGG ISLAND.



UNIMAK ISLAND—IKATAN PENINSULA—WEST ANCHOR COVE—SEAPLANE ANCHORAGE, LOOKING NORTHEAST TOWARD DEER ISLAND, UNGA ISLAND IN MIDDLE DISTANCE.



UNIMAK ISLAND—IKATAN PENINSULA, CANNERY AT SOUTHWEST HEAD OF IKATAN BAY.



UNIMAK ISLAND—SHISHALDIN VOLCANO (9,387 ft.); ISANOTSKI PEAKS (8,088 ft.); ROUND TOP (6,155 ft.).



SHISHALDIN VOLCANO.



ISANOTSKI PEAKS.

[Reserved for photograph]



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168°
167°
166°
165°
54° 30'
54°
INDEX OF PHOTOGRAPHS
Indicates approximate direction toward which aerial photograph was taken.
Indicates photograph taken at close range
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KRENITZIN GROUP
UNIMAK PASS
Akun Head
Little Bay
Akutan Bay
2500
Akun Cove
North Head
Hot Springs B
Lost Hbr
Akun I.
Tanginak I
Ugamak I
Lava Pt
Surf B
Trident B
4100
Akutan I.
Akutan Hbr
Flat Hgt
Vulcan Cove
Sarana Bay
Battery Pt
Tigalda I.
Rootok I
760
700
Avatanak I
C. Cheerful
Dutch Hbr
Akutan Pass
C. Kalekta
Wislow I
Bay
Kalekta C
Baby Is
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Unalga I
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C Cheerful
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Unalga Pass
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UNALASKA ISLAND—ILIULIUK BAY AND DUTCH HARBOR FROM SEAWARD.



UNALASKA ISLAND—DUTCH HARBOR, SEAPLANE ANCHORAGE AND RADIO STATION.



UNALASKA ISLAND—ILIULIUK VILLAGE.



UNALASKA ISLAND—GENERAL VIEW DUTCH HARBOR AND ILIULIUK HARBOR.



UNALASKA ISLAND—SEAPLANE ANCHORAGE IN ILIULIUK HARBOR.



UNALASKA ISLAND—CAPE CHEERFUL, LOOKING WEST-NORTHWEST.



UNALASKA ISLAND—CAPE KALEKTA AND PRIEST ROCK, LOOKING EAST-NORTHEAST.

[Reserved for photograph]

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Duluth	321 Federal Building.
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Chicago	Room 481, Post Office Building.
Cleveland	Room 408, Federal Building.
Buffalo	Room 345, Post Office Building.

These offices are supplied with information and publications pertaining to air navigation, and aviators and others interested are cordially invited to visit them and consult freely the officers in charge during the office hours, 9 a.m. to 4:30 p.m., except Saturday, when the offices close at 1 p.m.

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